

State of Florida



**Public Service Commission**

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090000-OT

**DATE:** June 9, 2009  
**TO:** Ann Cole, Commission Clerk - PSC, Office of Commission Clerk  
**FROM:** Dan Hoppe, Director, Division of Service, Safety & Consumer Assistance *AMH*  
**RE:** Annual Distribution Reliability Reports

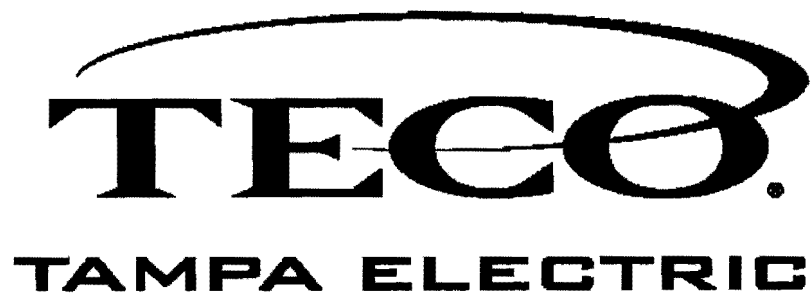
Please add the following Distribution Reliability Reports for calendar year 2008, to Case Management, docket number 090000-OT. The data in these reports are comparable to those in document number 02662-08 found in docket number 080000-OT which contained the reports for 2008. If you have any questions, please let me know. Thank you.

Utility	Data Year	Year Filed	Document Number
FPL	2008	2009	01667-09
FPUC	2008	2009	01658-09
Gulf	2008	2009	01657-09
PEF	2008	2009	None
TECO	2008	2009	None

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**2008  
STORM IMPLEMENTATION PLAN  
&  
ANNUAL RELIABILITY PERFORMANCE  
REPORTS**

**FILED: MARCH 2, 2009**

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<b>2008 Storm Implementation Plan &amp; Annual Reliability Performance Reports</b>
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### **EXECUTIVE SUMMARY**

#### **A) Initiative 1: Three-year Vegetation Management**

Tampa Electric's Vegetation Management Program includes a balanced approach to improve the quality of line clearance and reliability while adhering to the American National Standards Institute ("ANSI") A300 pruning standards. The company manages over 6,400 miles of distribution and 1,200 miles of transmission lines over five counties within Florida. Tampa Electric's current vegetation management plans call for trimming its distribution system on a three-year cycle while incorporating the flexibility to change circuit prioritization utilizing the company's reliability based methodology. However, Tampa Electric's current trim cycle is subject to review and modification subsequent to the Commission decision in Docket No. 080317-EI. For 2009, the Vegetation Management Program's budget is \$16.1 million.

#### **B) Initiative 2: Joint Use Pole Attachments Audit**

In 2008, Tampa Electric completed its pole attachment audit, conducted comprehensive loading analyses and streamlined processes in order to better manage attachment requests from attaching entities. Approximately 75 percent of the company's poles were examined during the pole attachment audit to identify any unreported attachments, and a comprehensive loading analysis was performed on 658 poles with 552 determined to be overloaded with corrective action initiated. For 2009, Tampa Electric will conduct comprehensive load analyses where necessary. The 2009 costs to perform the comprehensive load analyses are estimated at \$96,000.

#### **C) Initiative 3: Transmission Structure Inspection Program**

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The Tampa Electric transmission system inspection program is a multi-pronged approach that identifies potential transmission system issues. In 2008, the above ground inspections, groundline inspections, aerial infrared patrol and substation inspections were performed as scheduled. The total cost for the 2008 inspection program was \$502,600. For 2009, all inspections are scheduled to meet program requirements. The 2009 inspection program budget is \$545,900.

### **D) Initiative 4: Hardening of Existing Transmission Structures**

Tampa Electric is hardening the existing transmission system in a prudent, cost-effective manner utilizing its inspection and maintenance program to systematically replace wood structures with non-wood structures. In 2008, Tampa Electric hardened 789 structures at a cost of \$12.3 million. This included 650 structure replacements with steel or concrete poles and 139 sets of insulators replaced with polymer insulators. For 2009, Tampa Electric's goal is to harden 683 transmission structures with a budget of \$10.7 million.

### **E) Initiative 5: Geographic Information System**

In June 2008, Tampa Electric completed implementation of its Geographic Information System ("GIS") that contains all facility data for its transmission, substation, distribution and lighting facilities. All interfaces are functioning and users are performing their daily work in GIS. Expenditures for 2008 totaled \$2.5 million. For 2009, the project team will continue working toward resolution of outstanding system issues with expenditures estimated to be \$1.9 million.

### **F) Initiative 6: Post-Storm Data Collection**

Tampa Electric's process for post storm forensic data collection and analysis has been in place for approximately years. The company has



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continued its relationship with its outside contractor to perform the multiple components of the plan that include the establishment of a field asset database, forensic measurement protocol, integration of forensics activity with overall system restoration, forensics data sampling and reporting format. Should a storm impact Tampa Electric's service area, the overall process will facilitate post-storm data collection and analysis that will be used to determine the root cause of damage occurring to the company's transmission and distribution system. As Tampa Electric's GIS continues to evolve, the forensics process will leverage that system through implementation of damage assessment. Dollar impacts for forensic analysis are contingent upon execution of the contractor if a storm is approaching. These costs are estimated to be \$50,000 each time the post storm forensic contractor is activated.

### **G) Initiative 7: Outage Data - Overhead and Underground Systems**

Tampa Electric experienced no extreme weather events in 2008. The company's GIS was implemented in June 2008. With the GIS enhancement to the company's established process for collecting post-storm data and conducting forensic analysis, Tampa Electric has appropriate measures in place to manage outage performance data of overhead and underground systems should a major storm event occur.

### **H) Initiative 8: Increase Coordination with Local Governments**

In 2008, Tampa Electric continued its work with governmental officials and staff on various long range contingency planning committees with strong communication efforts among the various entities as a significant focus. Some of these standing committees are working on new ideas for temporary housing, best locations, ideas and practices for rebuilding damaged infrastructure, and economic redevelopment. Other collaborative efforts included forming a consensus on appropriate

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landscaping in rights-of-way and better enforcement of tree planting in those areas. Finally, Tampa Electric continued to communicate storm preparedness information to its customers prior to hurricane season through the media. For 2009, Tampa Electric's continued dissemination of storm preparedness information prior to hurricane season as well as more workshops and open dialogue are planned as the coordinated effort between the company and the communities it serves remains a vital component of overall storm preparedness and the necessary recovery efforts should a major storm affect the service area.

### **I) Initiative 9: Collaborative Research**

Tampa Electric is participating in a collaborative research effort with the state's other investor-owned electric utilities and several municipals and cooperatives to further the development of storm resilient electric utility infrastructure and technologies that reduce storm restoration costs and outages to customers. This research is being facilitated by the Public Utility Research Center ("PURC") at the University of Florida. A steering committee comprised of one member from each of the participating utilities is providing the direction for research initiatives. For 2008, areas of research included the economics of undergrounding, granular analysis and modeling of hurricane winds, vegetation management and a review of the forensic data gathering process. For 2009, work will continue on the economics of undergrounding and the analysis and modeling of hurricane winds.

### **J) Initiative 10: Disaster Preparedness and Recovery Plan**

TECO Energy and Tampa Electric Emergency Management plans support all hazards including extreme weather events. In 2008, TECO Energy companies participated in a number of internal and external preparedness exercises and will continue with this same level of preparedness for 2009.

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Lessons learned from exercises are in various stages of implementation or review. Tampa Electric continues collaborating with local emergency management agencies to synchronize community restoration priorities and maintain communication and response plans. In addition, Tampa Electric is in a Post Disaster Redevelopment Plan ("PDRP") leadership role in Hillsborough County; involved in post disaster redevelopment planning with local public and private infrastructure.

### **K) Wood Pole Inspection Program**

Tampa Electric's Wood Pole Groundline Inspection Program for its distribution and transmission poles is based on the requirements of the National Electrical Safety Code ("NESC") and is designed to inspect 12.5 percent or one-eight of its wooden pole population each year. The company manages approximately 307,200 wooden poles included in a total in-service pole population of approximately 326,000 over five counties within Florida. In 2008, Tampa Electric performed over 42,000 wood pole inspections. The 2008 Wood Pole Groundline Inspection Program expenditures, which include distribution pole reinforcements, exceeded \$1.8 million. For 2009, the company plans to inspect 38,895 distribution and 3,736 transmission poles with a budget exceeding \$2.0 million, which includes distribution pole reinforcements.

**SECTION I - Storm Preparedness Plans**

**A) Initiative 1: Three-Year Vegetation Management**

**1) Program Overview**

Tampa Electric's Vegetation Management Program provides a balanced approach to vegetation management and currently calls for a phased approach toward a three-year tree trim cycle, which will improve the quality of line clearance while increasing system reliability related to system hardening activities. Tampa Electric began ramping up its vegetation management program at the end of 2005, with an emphasis on critical trimming needed in areas identified by the company's reliability based methodology. For 2008, the company continued its progression toward a three-year tree trim cycle plan. Results for the year, on a system wide basis as well as by specific region, are provided in various tables contained in Section D of the Appendix. By 2010, Tampa Electric anticipates reaching the first year of a three-year tree trim cycle for distribution facilities; however, the company's current trim cycle goal is subject to review and modification subsequent to the Commission decision in Docket No. 080317-EI.

**2) Description of Vegetation Management Program**

In 2008, Tampa Electric's Vegetation Management Program utilized nine full time company employees and approximately 200 contracted tree trim personnel to manage the company's distribution tree trimming requirements. The company's Vegetation Management Program utilizes the American National Standards Institute ("ANSI") A300 standards which are implemented through Tampa Electric's Transmission and Distribution Line Clearance Specification. This comprehensive document generally covers specifications related to operations, notification guidelines, tree

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trimming and removal, chemical application, targeted completion dates, overtime, and non-compliance. In addition, Tampa Electric updated its Transmission Vegetation Management Program ("TVMP") to address the North American Electric Reliability Corporation FAC-003-1 standard. In December 2008, the Florida Reliability Coordinating Council completed an audit of Tampa Electric's compliance with FAC-003-1. Tampa Electric's TVMP was found to be a "fully compliant, well organized and high quality document."

In 2008, Tampa Electric utilized approximately 30 contracted tree trim personnel to manage the company's transmission tree trimming requirements.

### **3) Summary of Past and Future Activities**

During 2008, Tampa Electric's System Reliability and Line Clearance Departments utilized a third party vegetation management software application. Using this application, an analysis was completed which took into consideration multi-year circuit performance data, trim cycles and cost. The analysis has resulted in the development of a multi-year vegetation management plan which optimizes activities from both a reliability based and cost-effective standpoint. In September 2008, Tampa Electric released approximately 60 percent of its tree trim personnel to CenterPoint Utility in Houston, Texas. These crews spent four weeks assisting with the restoration efforts in the wake of Hurricane Ike. For 2009, Tampa Electric will still review current reliability-based information, pertinent field and customer information along with its annual trimming plan in order to maximize the overall effectiveness of its vegetation management program.

### **4) Tree-related Terms and Definitions**

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Tampa Electric defines a “danger tree” as any tree that is dead, diseased, or damaged and in danger of impacting the distribution or transmission facilities. All spot-trimming or “hot-spot” trimming is defined as any internal or external customer driven request for tree trimming. Therefore, all tree trim requests outside of full circuit trimming activities are categorized as hot-spot trims. Tampa Electric does not commonly utilize the terms “demand trim” and “mid-cycle trim.”

### **5) Criteria Used to Select a Vegetation Management Response**

Tampa Electric’s Line Clearance & Inspection Right-of-Way Supervisors in conjunction with a contracted tree trim General Foreman evaluate whether or not to remove a tree, hot-spot trim or perform full circuit trimming based on several variables. These variables include the date the circuit was last trimmed, system reliability data and visual inspection of the circuit. Specific to tree removal, if the trunk of the tree is growing underneath or nearly underneath the electrical conductor and cannot be trimmed in accordance with the ANSI A300 standard, the tree is removed. On occasion, Tampa Electric has replaced a tree with a more suitable tree at Tampa Electric’s expense. The company’s Right Tree – Right Place Program promotes consumer education and encourages customers to plant trees that will not interfere with electrical facilities. Tampa Electric operates and maintains a customer information web site which allows any customer to review the recommended set back distances for planting from electrical facilities as well as viewing and printing a recommended tree list.

### **6) Vegetation Management Practices - Utility Easements and Rights-of-Way**

Tampa Electric’s tree clearing practices within and outside utility easements and rights-of-way utilize a variety of methods to determine the corrective actions to be taken on a case-by-case basis. On private

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properties, where tree and/or brush removal is required to complete the maintenance activity, the contractor or company representative is required to secure permission of property owners prior to removing and/or chemically treating any trees or brush.

Tampa Electric's tree removal practices for trees that abut or intrude into easements and authorized rights-of-way, also utilize a variety of methods to determine corrective actions to be taken on a case-by-case basis. Specific to trees that intrude into easements and authorized rights-of-way, the contractor is required to make every reasonable effort to secure permission to trim trees that abut or intrude into easements and rights-of-way.

### **7) Relevant Utility Tariffs**

Tampa Electric is not limited in terms of tariff language pertaining to vegetation management within easements and rights-of-way.

### **8) Company Practices Regarding Trimming Requests**

All external based requests for tree trimming are routed to representatives in the company's Customer Service - One Source Department for input into the work order management system. Work orders are received by line clearance personnel or assigned tree trim contractors for a field inspection. Once the field review is complete, proper action is taken to satisfy the customer request. These actions include communicating directly with the customer on-site or leaving a door hanger with detailed tree trimming information. In 2008, approximately 50 percent of all customer driven tree trim requests resulted in some form of tree trimming. The balance of the requests did not require immediate action or they impacted other utilities.



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### **9) 2009 Projected Activities**

For 2009, Tampa Electric has 246 dedicated distribution tree trim personnel throughout its seven service areas. The number of tree trim personnel may be increased throughout the year as required to achieve the company's year end budget and mileage goals. These dedicated resources are broken out into two categories: proactive and reactive tree trim crews. The proactive tree trim crews are utilized for circuit tree trimming activities and consist of 224 personnel. The reactive tree trim crews consist of 22 tree trim personnel and are utilized to trim for hot spots, customer requests, work orders associated with circuit improvement progress and worst performing circuits. It is important to note that the total number of proactive and reactive tree trim crews can vary due to a number of factors including, but not limited to, labor shortage, available work, storm response, etc.

### **10) Local Community Participation**

Tampa Electric has increased its efforts toward effective vegetation management as part of a coordinated plan with local governments. The relationship between tree preservation and appropriate utility line clearance activities is a delicate balance. Tampa Electric, in conjunction with its local government partners, has developed tree-planting guides, which encompass company trim procedures. Moreover, Tampa Electric's Line Clearance Department holds annual meetings with local governments related to vegetation management to address the issues.

During the fourth quarter 2008, Tampa Electric submitted its application to the National Arbor Day Foundation's Tree Line USA Program and received accreditation in the first quarter 2009.

In addition, Tampa Electric participated in the creation of public service



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announcements for the City of Tampa's public television station as well as a radio program for the University of South Florida. Each of these educational presentations focused on hurricane protection as well as a general overview of Tampa Electric's line clearance program. Tampa Electric also participated in the City of Tampa's Urban Forest Sustainability Steering Committee as well as the Hillsborough County Tree and Landscape Advisory Committee.

### **11) Danger Tree Program & Related Information**

Data collection related to danger trees was incorporated into Tampa Electric's work order management system effective January 2007 to enhance future reporting capabilities. During 2008, Tampa Electric evaluated 16 potential danger trees, resulting in trees either being removed or trimmed.

### **12) Comparison with a Three-Year Program**

Tampa Electric filed its 2006 Storm Implementation Plan on June 1, 2006. The plan calls for Tampa Electric to transition to a three-year tree trim cycle plan with special emphasis on critical trimming needs as identified by the company's reliability based methodology; however, the company's current trim cycle goal is subject to review and modification subsequent to the Commission decision in Docket No. 080317-EI.

### **13) Conclusion**

Tampa Electric has set forth an aggressive program to effectively operate and manage its overall Vegetation Management Program. Tampa Electric has continued to enhance the level of communication and coordination with local communities and governments. By 2010, the company anticipates reaching the first year of its three-year tree trim cycle plan; however, the company's current trim cycle goal is subject to review and

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modification subsequent to the Commission decision in Docket No. 080317-EI.

### **B) Initiative 2: Joint Use Pole Attachments Audit**

#### **1) Overview**

In 2008, the Joint Use Department streamlined processes in order to better manage attachment requests from attaching entities. Two programs that were continued included a pole attachment audit and a comprehensive pole loading analysis on all poles with joint use attachments that failed an initial load screening. As a result, 75 percent of the company's poles were audited during the pole attachment audit. Comprehensive loading analysis was performed on 658 poles with 552 determined to be overloaded with corrective action initiated.

#### **2) Joint Use Agreements**

There is an opportunity for unknown foreign attachments to exist on facilities that place additional loading on the facility and that may, in fact, create an overload situation. To help mitigate potential overload situations, all Tampa Electric joint use agreements have provisions that allow for periodic inspections and audits of all joint use attachments to Tampa Electric facilities. In addition, all agreements have provisions that require the attaching party to build and maintain attachments within NESC guidelines or Tampa Electric specifications, whichever is more stringent. All of Tampa Electric's existing joint use agreements require attaching parties to receive authorization from the company prior to attaching any cable to its facilities. During 2008, Tampa Electric reviewed all known attachment records and verified that the company has joint use agreements with all but one attaching entity with negotiations underway to achieve resolution. Tampa Electric has a total of 34 joint use agreements with attaching entities.

### **3) Tampa Electric's Joint Use Department**

The Joint Use Department streamlined processes to better manage attachment requests from attaching entities. The best way to mitigate storm related issues on poles with joint use attachments is to ensure the poles are not overloaded and meet the requirements of the NESC or Tampa Electric Standards, whichever is more stringent. All joint use agreements require attaching entities to apply for and gain permission to make attachments to Tampa Electric's poles. Tampa Electric implemented a process for receiving, reviewing and authorizing pole attachment applications in 2001. In 2008, the process was improved and will be integrated with the company's GIS in 2009. The company also made improvements in its notification processes through the National Joint Utilities Notification System. Tampa Electric's permit application process requires a thorough review of the application, an engineering assessment of every pole where attachments are being proposed, which includes comprehensive loading analysis and compliance with NESC or Tampa Electric's construction standards, the completion of any necessary construction to ensure poles are ready for attachments, Tampa Electric's permission to attach to the poles requested, and, a post inspection and authorization of the attachments that have been placed in the field.

During 2008, Tampa Electric's Joint Use Department processed 268 pole attachment applications for 2,621 poles. As a result, the company identified 396 distribution poles that were currently overloaded or would be overloaded while processing pole attachment applications from authorized joint use entities. During these assessments, there were 261 poles that were overloaded due to existing joint use attachments or proposed attachments and 135 poles that were overloaded due to current Tampa Electric attachments.

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Combining the 2,621 poles that were assessed through the pole attachment application process and the 658 poles that were evaluated through the comprehensive loading analysis, there were 906 poles that had NESC violations due to joint use attachments and 37 poles with NESC violations due to Tampa Electric attachments. All poles with NESC violations were either corrected through adjustments to attachments, pole replacements or by joint use entities' removal of the attachments in violation.

One area of concern has been the practice of overlashed attachments (i.e., attaching to an existing attachment) being added to Tampa Electric's poles without prior engineering and authorization. Tampa Electric received notification via its permit application process on 1,855 poles where overlashed attachments had been made without prior engineering and authorization. This is a 17 percent decrease from 2007 overlash notifications. Tampa Electric and its attaching entities entered into a stipulation agreement in 2007 whereby the attaching entities agreed to submit notification of all proposed overlashed attachments.

#### **4) Initiatives that Align with Tampa Electric's Pole Inspection Program**

In 2008, two initiatives associated with Tampa Electric's pole inspection program were implemented. These initiatives were the Comprehensive Loading Analysis and the Pole Attachment Audit. Comprehensive loading analysis was performed on all joint use poles that were screened as being potentially overloaded during the pole inspection program. If the comprehensive loading analysis determined a pole was overloaded, the pole was assigned to the Engineering department for work request creation and design. Corrective action can be accomplished using various methods including a replacement of the pole, guying, or the pole could be

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upgraded to the appropriate level of strength by installing an Osmose® E-T Truss. Tampa Electric's cost of the Comprehensive Loading Analysis initiative for 2008 was \$50,400. The cost of corrective measures to bring all overloaded poles back into compliance is estimated to be \$1.3 million. Tampa Electric identified 189 poles overloaded due to joint use attachments. Tampa Electric is coordinating corrective action on these poles with the joint use entities involved.

In 2008, Tampa Electric audited 75 percent of its system which completed the company's Pole Attachment Audit. The cost for the 2008 audit was \$417,500. The main benefit of performing the audit is the identification of unauthorized attachments. This allows Tampa Electric to perform the engineering and loading analysis on these poles to ensure that all loading requirements are met.

### **5) Conclusion:**

In 2008, Tampa Electric's Joint Use Department completed the Pole Attachment Audit and continued the Comprehensive Loading Analysis initiatives. The results of the Pole Attachment Audit are being evaluated and quality control checks by the attaching entities are underway. For 2009, costs to perform the Comprehensive Loading Analysis are estimated to be \$96,000.

## **C) Initiative 3: Six-Year Inspection Cycle for Transmission Structures**

### **1) Overview**

The Tampa Electric Transmission System Inspection Program identifies potential system issues along the entire transmission circuit by analyzing the structural conditions at the groundline and above ground as well as the conductor spans. The inspection program is a multi-pronged approach with inspection cycles of one, six or eight years depending on the goals or

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requirements of the individual inspection activity. Formal inspection activities included in the program are groundline inspection, ground patrol, aerial infrared patrol, above ground inspection and substation inspections. The ground patrol, aerial infrared patrol and substation inspections are performed on one-year cycles, the above ground inspection is performed on a six-year cycle and the groundline inspection is performed on an eight-year cycle. Additionally, pre-climb inspections are performed prior to commencing work on any structure.

The 2009 budget for the groundline inspection, ground patrol, aerial infrared patrol, above ground inspection and substation inspections is \$545,900.

### **2) Groundline Inspection**

Tampa Electric has implemented a groundline inspection program that complies with the Commission's order requiring groundline inspection of wooden transmission structures. In addition, Tampa Electric included provisions in the groundline inspection program to identify deficiencies with non-wood structures. Groundline inspections are performed on an eight year cycle. At a minimum, each year approximately 12.5 percent of all transmission structures are scheduled for inspection.

In 2008, groundline inspections were performed on 3,636 transmission structures comprising 23 circuits at a cost of \$106,900. This represents approximately 15 percent of the transmission system. Pole load screening was performed on the 256 structures having joint use attachments. Results were that 172 structures passed the pole load screening and 84 structures required a comprehensive pole loading analysis. Results of the comprehensive pole loading analysis indicated that 17 structures passed and 67 structures were overloaded and replacement will occur.

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In 2009, groundline inspections are planned on 2,845 transmission structures comprising 12 circuits. This represents approximately 12.5 percent of the company's transmission structures.

### **3) Ground Patrol**

The ground patrol is a visual inspection for deficiencies with poles, insulators, switches, conductors, static wire and grounding provisions, crossarms, guying, hardware and encroachment.

In 2008, all 230 kV and 138 kV circuits and all critical 69 kV circuits were patrolled by ground at least once. Ground patrols were performed on approximately 34 percent of the non-critical 69 kV circuits. The cost for the 2008 ground patrol was \$44,600.

For 2009, ground patrol is planned for all transmission circuits. All 230 kV and 138 kV and all critical 69 kV circuits will be ground patrolled prior to the peak of hurricane season with the remaining transmission circuits being completed by the end of 2009.

### **4) Aerial Infrared Patrol**

The aerial infrared patrol is performed annually on the entire transmission system. It is performed by helicopter with a contractor specializing in thermographic powerline inspections and a company employee serving as navigator and observer. This inspection identifies areas of concern that are not readily identifiable by normal visual methods as well as splices and other connections that are heating abnormally and may result in premature failure of the component. This inspection also identifies system deficiencies such as broken crossarms and visibly damaged poles. Since many of these structures are on limited access rights-of-way, this aerial

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inspection provides a frequent review of the entire transmission system and helps identify potential reliability issues in a timely manner.

In 2008, the infrared patrol was performed on 100 percent of the transmission circuits. The cost for the 2008 aerial infrared patrol was \$52,600.

For 2009, the infrared patrol is planned for 100 percent of the transmission circuits.

### **5) Above Ground Inspection**

Above ground inspections are performed on transmission structures on a six-year cycle; therefore, each year approximately 17 percent or one-sixth of transmission structures are inspected. This inspection is performed by a contractor specializing in above ground power pole inspection and may be performed by climbers, bucket truck or helicopter. The above ground inspection is a comprehensive inspection that includes assessment of poles, insulators, switches, conductors, static wire, grounding provisions, crossarms, guying, hardware and encroachment issues. This program provides a detailed review of the above ground condition of the structure.

In 2008, above ground inspections were performed on 3,874 structures, or 17 percent of the system, comprising 24 circuits. The cost for the 2008 above ground inspection was \$176,700.

For 2009, above ground inspections are planned for 3,879 structures comprising 13 circuits. This represents approximately 17 percent of the company's transmission structures.

### **6) Substation Inspections**



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Substation inspections consist at a minimum of an annual inspection of all transmission substations as well as annual infrared and dissolved gas inspections. These inspections identify equipment deficiencies and the information is entered into a maintenance database. The database is reviewed by management for prioritization and facilitation of the remediation process across Tampa Electric's system.

In 2008, substation inspections were performed on all 65 transmission substations. The cost for the substation inspections was \$115,900.

For 2009, substation inspections are planned on all transmission substations.

### **7) Pre-Climb Inspections**

While not a part of the formal inspection program outlined above, Tampa Electric construction crews are required to inspect poles prior to climbing. As part of these inspections, the employee is required to visually inspect each pole prior to climbing and sound each pole with a hammer if deemed necessary. These pre-climbing inspections serve to provide an additional integrity check of poles prior to the employee ascending the pole and may also result in the identification of any structural deterioration issues.

### **8) Reporting**

Standardized reports are provided for each of the formal inspections. Deficiencies identified during the inspections are entered into a database. This maintenance database is used to prioritize and manage required remediation. Deficiencies identified during the pre-climb inspections are assessed by the on-site crew and reported to supervisory personnel for determination of corrective action.

### **D) Initiative 4: Storm Hardening Activities for Transmission Structures**

#### **1) Overview**

Tampa Electric is hardening the existing transmission system in a prudent, cost-effective manner utilizing its inspection and maintenance program. This plan includes the systematic replacement of wood transmission structures with non-wood structures during the company's annual maintenance of the transmission system. Additionally, the company will utilize non-wood structures for all new transmission line construction projects as well as system rebuilds and line relocations.

#### **2) 2008 Activity**

In 2008, Tampa Electric hardened 789 structures at a cost of \$12.2 million. This included 650 structure replacements with steel or concrete poles and 139 sets of insulators replaced with polymer insulators.

#### **3) 2009 Activity**

For 2009, Tampa Electric plans to harden 683 transmission structures with a budget of \$10.7 million. This includes 584 structure replacements with steel or concrete poles and 99 sets of insulators replaced with polymer insulators.

### **E) Initiative 5: Geographic Information System**

#### **1) Overview**

In June 2008, Tampa Electric completed implementation of its GIS that contains all facility data for its transmission, substation, distribution and lighting facilities. All interfaces are functioning and users are performing their daily work in GIS. The project team is working with the vendor to resolve the remaining issues with the system and expects to formally accept the system by the end of the first quarter 2009.

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The new system provides an open database architecture that supports the integration of 15 key applications and improves data access for Tampa Electric employees such as project planners, engineers, inspectors, drafting staff and field construction and maintenance teams. The new system will improve service delivery and processes, as well as provide a foundation to leverage the network asset data for the company's inspection, outage management and work management systems. Because more users in the office and field have access to current information, improvements in design, customer service and operations and maintenance costs are expected.

GIS allows users to access the entire facility database to perform additions/removals, run queries, perform spatial analysis of the data and view graphical representations of the facilities on a current land base.

### **2) Conclusion**

Tampa Electric's GIS will be a critical component of the company's storm hardening plan moving forward. The system will enhance post-storm damage assessment, forensic analysis, joint use administration and an evaluation of the company's construction standards and potential hardening projects. The system was implemented in June 2008.

### **F) Initiative 6: Post-Storm Data Collection**

#### **1) Establishment of a Forensics Team**

Tampa Electric has continued its relationship with its outside contractor to perform the post storm forensic analysis. Its purpose is to determine the root cause of storm damage after a major storm.

### **2) Establishment of Forensics Measurements**

The contractor used the company's existing data sources and built a database of distribution and transmission structures and facilities on a geographic basis (service areas). It was the contractor's responsibility to collect data, catalog and produce the database prior to Tampa Electric's 2007 storm season. This database provides a complete understanding of the total facilities exposed to storm conditions in a given area in order to effectively analyze the extent of damage.

Pole damage compared to damage on other overhead components, such as conductors and equipment, generally has the biggest impacts on the system reliability, restoration and resource allocation. Therefore, Tampa Electric's forensic analysis will first look at pole damage during storm events. Pole damage during hurricanes can be categorized into two major categories: pole leaning and pole breaking. Recommendations on pole setting depth in different soil types will be provided, if needed.

Contributing factors to pole breakages during hurricanes can include trees, debris, presence of deterioration and wind. Although these factors may seem independent, they will effectively result in pole overloading when pole breakage has occurred. Therefore, the impacts of these external factors will be examined and analyzed. Meanwhile, internal factors such as pole material (e.g., concrete, wood, metal), pole height/class, framing types, conductors, attachments and equipment will also be considered to determine the current pole loading profile. The company's contractor will take both external and internal factors into account and evaluate pole loading in both normal conditions (based on design criteria) and hurricane conditions.

Breakage rates (defined as the proportion of pole breakages to the total

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pole population) as opposed to absolute breakage counts will be considered in forensic analysis. Breakage rate analysis will be applied to every category of pole structures. Categories of pole structures are classified by each pole structure's unique combination of features including pole height/class, framing type, conductors, attachments and equipment and presence of deterioration, etc. Each category of pole structure will be studied in each wind region (the region that has a unique range of wind speed) to determine the breakage rate.

### **3) Establishment of Forensics Database Format**

In 2007, Tampa Electric and the contractor established a database of the company's transmission and distribution assets that will be used for the post-storm forensic analysis. Tampa Electric provided data to the contractor to construct the database of Tampa Electric assets.

Tampa Electric's existing data sources were used to build a database of distribution and transmission structures and facilities on a geographic basis. The database includes such information as pole size, average age, pole population by type of treatment, pole inspection and maintenance data such as last inspection or treatment, types of conductor, foreign utility attachment size and quantity, tree trimming cycles by area and a number of other important factors and variables used for forensic analysis.

The database was built from Tampa Electric's pole inventory, pole inspection records and joint use attachment records. To address additional infrastructure installed in the company's system since the database was developed and in the interim between full integration of GIS, Tampa Electric and the contractor completing the forensic analysis determined that field collectors would collect data. The analysis completed after the data is collected will be cross checked to the current

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database and information which is not contained in the database will be updated and sent to Tampa Electric accordingly. This will allow the company to complete faster data collection in the field during a storm event.

### **4) GIS and Forensics Data Tracking Integration**

In 2008, it was determined to continue the relationship between Tampa Electric and its forensic analysis contractor.

As Tampa Electric's GIS is fully integrated into all aspects of the corporation, the company will re-assess the capabilities of using internal resources as opposed to the current contracted resources it has to complete forensic data analysis.

### **5) Forensics and Restoration Process Integration**

As a severe storm approaches, the contractor will be put on notice when Tampa Electric activates its Incident Command System ("ICS"). This will likely occur when the storm is forecasted to be within three days of landfall. The contractor is required to mobilize data gathering personnel and equipment no later than one day prior to landfall to be ready for data gathering as soon as it is safe after the storm passes. The decision to mobilize the contractor will be made by the company in conjunction with the decision to mobilize foreign crews for restoration work.

Prior to data collection, the contractor will work with Tampa Electric to determine the geographical areas to be patrolled for data collection. This will be done using storm path and wind strength information, flood/surge information, initial damage assessment reports and other relevant data. Scheduling of the data collection effort will be done in conjunction with the company's restoration effort.

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The contractor will patrol a representative sample of the damaged areas of the electrical system following a major storm event and perform the data collection process. At a minimum, the following types of information will be collected:

- Pole/Structure – type of damage, size and type of pole, age (birth mark), and likely cause of damage
- Conductor – type of damage, conductor or joint use size and type, and likely cause of damage
- Equipment - type of damage, overhead or underground, size and type, and likely cause of damage
- Hardware - type of damage, size and type, and likely cause of damage

To collect post-storm field data, a data collection model will be used by field personnel doing the damage assessments. This data collection model will exist electronically for use on laptop computers in the field. The electronic spreadsheet will be based on the available information from the initial data inventory and the additional information required from field collection. The input form of an electronic collection tool will include many drop down selections based on all the possible alternatives found on Tampa Electric's system to facilitate easy data entry for field personnel and ensure consistent information for later analysis.

### **6) Forensics Data Sampling Methodology**

Tampa Electric will work with the post-storm forensic analysis contractor to perform the initial assessment of the storm damage area to determine the data sample to be collected. This initial assessment will provide information on the size of the area(s) impacted by the storm and the level of damage in the area(s).

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From the damage assessment and initial data inventory, the contractor will make a correlation between size of damage area and the number of facilities exposed to storm force winds. This analysis will then lead to an estimated sample size to be collected and also direct the areas in which samples should be collected. The contractor will use weather reports and wind data from throughout the storm area to analyze the wind forces Tampa Electric facilities encountered during the storm.

### **7) Reporting Format Used to Report Forensics Results**

Following a storm event and the subsequent forensic analysis, Tampa Electric's contractor will provide a full report containing the data collected and resulting findings. The data collected will be an electronic database, Excel or Access format, with accompanying analyses, charts and diagrams.

Reporting for this project will include a detailed written report of findings, analyses, conclusions and recommendations for improvement in system performance. The report format will typically include the following sections:

- Summary of findings
- Available data
- Analysis and findings
- Integral analysis and interpretation
- Conclusions

### **8) Conclusion**

Tampa Electric has developed a process to gather the necessary data following a significant storm. This data will be used to determine the root cause of damage. The company will work with their forensic analysis



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contractor to complete the data collection and analysis. In 2008, no dollars were spent on post storm forensic analysis. In 2009, depending upon the number of storm events, additional costs may be incurred for the post-storm field work, analysis and reporting. Each time the post-storm forensic analysis contractor is activated the company will incur costs of approximately \$50,000.

### **G) Initiative 7: Outage Data - Overhead and Underground Systems**

#### **1) Overview**

Tampa Electric implemented GIS in June 2008 and has established a process for collecting post-storm data and conducting forensic analysis. In 2008, the company had no storm activity that required an overhead and underground performance review or report. The company believes that the measures currently in place will allow for initiatives related to GIS, post-storm data collection and outage data to be followed, should it experience any major storm events moving forward.

### **H) Initiative 8: Increase Coordination with Local Governments**

The following is a summary of Tampa Electric's 2008 activities with local governments in support of ongoing programs, storm preparation and activities. This information is also summarized in the matrix provided in the Appendix D.

#### **1) Communication Efforts**

Tampa Electric continues to forge excellent relationships with the local governments within its service territory. The company builds these relationships by assigning personnel from its Community Relations Department to each of the local governments it serves. These Community Relations representatives engage in ongoing discussions with local

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officials regarding critical issues such as storm restoration, underground conversions and vegetation management. Tampa Electric is committed to improving these relationships even further and will increase coordination in a number of key areas as outlined below.

In 2008, Tampa Electric's communication efforts focused on maintaining vital governmental contacts and participation on standing disaster recovery planning committees. Tampa Electric was invited to participate in several Hillsborough County led initiatives stemming from its ongoing efforts in recent years to share its own recovery plans with local governments.

Tampa Electric also made presentations at several workshops relating to storm preparedness in 2008. At the Federal level, these included the United States Coast Guard at the Port of Tampa. At the regional level, meetings were held with the Tampa Bay Regional Planning Council.

Community focused communications for 2008 included hurricane season news releases at the beginning of hurricane season to all the major media outlets that serve our customers. These releases were also posted on Tampa Electric's web site. Hurricane guides were published in the major newspapers that cover the company's service area, namely, the Tampa Tribune, Lakeland Ledger and Winter Haven News Chief.

### **2) Storm Workshop and Training with Local Government**

In 2008, joint workshops and training with governmental officials and Tampa Electric included a joint storm exercise with Hillsborough County's Emergency Support group. Also, Tampa Electric joined Hillsborough County in their PDRP Project involving both government and businesses who will have major roles in the area's recovery after a disaster. These

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committees cover topics such as temporary housing, economic recovery and infrastructure repair and replacement.

In addition, Tampa Electric and the City of Tampa reviewed and refined its Emergency Response Plan and Line Clearance practices and procedures with Tampa City Council and Administration.

### **3) Emergency Operation Centers – Key Personnel Contact**

For 2008, Emergency Operation Center (“EOC”) activations occurred in August in anticipation of Tropical Storm Fay. Tampa Electric continues to work with local governments to streamline the flow of information that is helpful to both the company’s and local government’s efforts to restore all services as quickly as possible. Prior to June 1 of each year, the company’s ICS plan is reviewed and updated to insure that company representatives to local EOC’s are in place and trained in the event of EOC activation.

### **4) Search and Rescue Teams – Assistance to Local Government**

For 2008, there was no activity to report due to an inactive hurricane season. However, Tampa Electric maintained a staff of lineman and vehicles ready to assist local fire departments with search and rescue activities. In 2009, the company, with the guidance of Hillsborough County, has begun training its own Certified Energy Rescue Team.

### **5) Tree Ordinances, Planting Guides and Trim Procedures**

In 2008, Tampa Electric Line Clearance personnel collaborated with municipal officials on several projects. These projects involved Hillsborough and Polk counties as well as the cities of Tampa and Temple Terrace on issues of rights-of-way landscaping and clearance as well as assisting in the production of public information shows for radio and

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television.

In 2009, the company's Manager of Vegetation Management and Inspections will continue to work with Community Relations staff to offer meetings with local government's Public Works supervisory staff on how Tampa Electric can best work with city staff in pre- and post-storm events and to better coordinate the company's tree trimming procedures with governmental ordinances.

### **6) Underground Conversions**

In 2007, the City of Oldsmar requested detailed estimates on underground conversions in redeveloping portions of the city. Agreement was reached on a three phase conversion project along State Street and construction began in 2008 with completion planned for March 2009. Other requests for underground conversions in 2008 came from the City of Tampa for a section of 22<sup>nd</sup> Street, and from the City of Temple Terrace for a section of 56<sup>th</sup> Street. Tampa Electric provided estimates which are currently under evaluation by these cities.

### **7) Planned Activities in 2009**

In 2009, Tampa Electric will continue to work with the local governments it serves to further enhance dialogue and seek further opportunities to partner in training. The company will continue its practice of inviting governmental officials to participate in training opportunities and tours as well as continue to provide education and information relating to overhead-to-underground utility conversions. As in the past, the company will continue providing its communities with public service information at the beginning of storm season via local news media. Tampa Electric will also continue to train its EOC representatives and designated search and rescue personnel in the unlikely event they are called into duty.

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### **I) Initiative 9: Collaborative Research**

#### **1) PURC Collaborative Research Report**

The following pages under this initiative contain the report on the collaborative research conducted by PURC for the Florida utilities.

# **Report on Collaborative Research for Hurricane Hardening**

Provided by

The Public Utility Research Center  
University of Florida

To the

Utility Sponsor Steering Committee

*February 16, 2009*

## **I. Introduction**

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

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Center (PURC).

The MOU has a term beginning March 1, 2006 and ending May 31, 2009, and may be renewed by mutual agreement of the Project Sponsors and PURC. In serving as the research coordinator for the Project outlined by the MOU, PURC manages the work flow and communications, develops work plans, serves as a subject matter expert and conducts research, facilitates the hiring of experts, coordinates with research vendors, advises the Project Sponsors and provides reports for Project activities. PURC's budgets for this work are in Appendix A.

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

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

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

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

### **II. Undergrounding**

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

The purpose of the collaborate research on undergrounding is to address the lacuna in existing research on the economics and effects of hardening strategies, including undergrounding, so that service providers, regulators, and customers

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<sup>2</sup> Previous reports are available at [http://www.cba.ufl.edu/purc/docs/report\\_PURC\\_Collaborative\\_Research\\_2007.pdf](http://www.cba.ufl.edu/purc/docs/report_PURC_Collaborative_Research_2007.pdf) and [http://www.cba.ufl.edu/purc/docs/report\\_PURC\\_Collaborative\\_Research\\_2008.pdf](http://www.cba.ufl.edu/purc/docs/report_PURC_Collaborative_Research_2008.pdf).



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can make informed decisions about the desirability of undergrounding policies and specific undergrounding projects.

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

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

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

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<sup>3</sup> The Phase I report is available at [http://www.cba.ufl.edu/purc/docs/initiatives\\_UndergroundingAssessment.pdf](http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment.pdf).

<sup>4</sup> The Phase II report is available at [http://www.cba.ufl.edu/purc/docs/initiatives\\_UndergroundingAssessment2.pdf](http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment2.pdf).

<sup>5</sup> The Request for Proposal is available at [http://www.cba.ufl.edu/purc/docs/initiatives\\_HHRequestProposal.pdf](http://www.cba.ufl.edu/purc/docs/initiatives_HHRequestProposal.pdf).

<sup>6</sup> The Phase III report is available at [http://www.cba.ufl.edu/purc/docs/initiatives\\_UndergroundingAssessment3.pdf](http://www.cba.ufl.edu/purc/docs/initiatives_UndergroundingAssessment3.pdf).

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approximate the information that is needed.

Appendix A provides the 2008 budgets for this work.

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

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

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

To address the second purpose of this project, namely to better understand the likely failure modes for different severe weather conditions, PURC developed a uniform forensics data gathering system for use by the utilities and a database that will allow for data sharing and that will match the forensics data with the wind monitoring and other weather data. The data gathering system consists of a uniform entry method that can be used on a tablet PC or entered onto the web

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once gathered by another means. Once a hurricane occurs and wind data is captured, forensic investigations of utilities infrastructure failure, conducted by the utility companies, will be overlaid with wind observations to correlate failure modes to wind speed and turbulence characteristics. Utility sponsors and PURC will analyze such data.

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

### **IV. Vegetation Management**

The goal of this project was to improve vegetation management practices so that vegetation related outages are reduced, vegetation clearing for post-storm restoration is reduced, and vegetation management is more cost-effective. The initial Vegetation Management workshop was held March 5-6, 2007; based upon the success of the workshop, the Steering Committee decided to host the workshop again in 2009.

The second Vegetation Management workshop was held on January 26 & 27, 2009. The meeting hosted representatives involved with all aspects of vegetation management for two days in Orlando, FL. Based upon the success and collaborative benefits reaped from the initial workshop, this meeting once again brought together industry experts in the field of vegetation management within Florida utilities and afforded time to share best practices in a collaborative learning environment.

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The workshop began with an introduction from Mr. Barry Moline, Executive Director of FMEA, and Dr. Mark Jamison, Director of PURC. Mr. Moline gave a brief overview of the events that led to the March 2007 workshop on vegetation management, and the work that was accomplished there. Dr. Jamison also welcomed the participants, introduced representatives from the FPSC and PURC in attendance, and offered a short discussion on the three other research initiatives of the steering committee: wind research, the economics of undergrounding, and forensics.

Representatives in attendance were then requested to deliver presentations on the status of their respective utility's vegetation management practices. Presentations included detail about trimming cycles, budgetary and staffing information, best practices, and other issues. Presentations were delivered by: Mr. Ken Lecasse of Sumter Electric Cooperative, Mr. Barry Grubb of FP&L, Mr. Mark Brown from the City of Winter Park, Mr. Dennis Spellicy of Progress Energy, Mr. Luke DiRuzza of TECO, and Ms. Diana Gillman of Lee County Electric Cooperative.

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

Mr. Devlin Higgins then delivered the FPSC staff presentation. The presentation discussed the severity of the 2004-2005 storm seasons and how the FPSC tried to learn from these events. This led the PSC to open dockets to discuss

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undergrounding, initiate the storm plan process, and review distribution construction standards. He reported that the FPSC has ten on-going initiatives, of which vegetation management is included, and that all investor owned utilities (IOUs), municipally-owned utilities, and cooperatives are on track in the third year of the program. In response, the volume of customer complaints is down and utility reporting is going well. He also pointed out that all reports to the legislature and other documents are on the FPSC website.

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

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

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

## **V. Conclusions**

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

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

Appendix A. PURC Budgets for 2008

RESEARCH COORDINATION FOR ELECTRICITY INFRASTRUCTURE HARDENING

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

<b>Undergrounding Study</b>				
Personnel				
PURC Faculty	\$11,200.00			<u>Faculty Activities</u>
Grad Student	\$1,650.00			Examining & editing reports on work plan
Administrative	<u>\$2,800.00</u>			for testing ex ante methodology
		\$15,650.00		Investigating hurricane models
<b>Wind Study</b>				Performing background research on hardening issues
Personnel				Drafting report for FPSC
PURC Faculty	\$11,200.00			Plan steering committee meeting for early 2008
Administrative	<u>\$2,800.00</u>			Planning Forensics Workshop - spring 2008
		\$14,000.00		Coordinating webinar for model testing
<b>Travel &amp; Meetings</b>				Organizing and managing weekly conference calls
Steering Comm. Mtgs	\$300.00			Attending meetings with FPSC staff or sponsors
Tallahassee Meetings	\$500.00			Managing PURC staff working on project
Forensics Workshop	<u>\$300.00</u>			
		\$300.00		<u>Graduate Student Activities</u>
<b>Miscellaneous</b>				Participating in and taking minutes for
Conference Calls		<u>\$2,500.00</u>		weekly conference calls
				Maintaining PURC work plan for overseeing projects
<b>Subtotal</b>			\$32,450.00	<u>Administrative Activities</u>
<b>University Overhead</b>			<u>\$10,816.67</u>	Proofreading all materials
<b>Total</b>			<u>\$43,266.67</u>	Taking minutes on conference calls
				Organizing conference calls and meetings
				Developing all administrative documents,
				such as contact lists and invoices
				Developing budgets
				Financial management

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

## Personnel

PURC Faculty	\$7,000.00
Grad Student	\$3,960.00
Administrative	<u>\$2,800.00</u>

\$13,760.00

**Wind Study**

## Personnel

PURC Faculty	\$11,200.00
Grad Student	\$1,320.00
Administrative	<u>\$2,800.00</u>

\$15,320.00

**Miscellaneous**

Grad Student	\$1,320.00
Conference Calls	<u>\$1,000.00</u>

\$2,320.00

## Subtotal

\$29,080.00

## University Overhead (25%)

\$9,693.33

## Total

\$38,773.33Faculty Activities

Coordinating work on model data gaps  
 Developing forensic data input formats  
 Plan vegetation management workshop for early 2009  
 Plan steering committee meeting for early 2009  
 Coordinating testing of model for report to FPSC  
 Organizing and managing conference calls  
 Attending meetings with FPSC staff or sponsors  
 Managing PURC staff working on project

Graduate Student Activities

Developing forensic data input formats  
 Maintaining forensics database  
 Planning vegetation management  
 workshop for early 2009  
 Testing of undergrounding model  
 Participating in and taking minutes  
 for weekly conference calls  
 Maintaining PURC work plan for overseeing projects

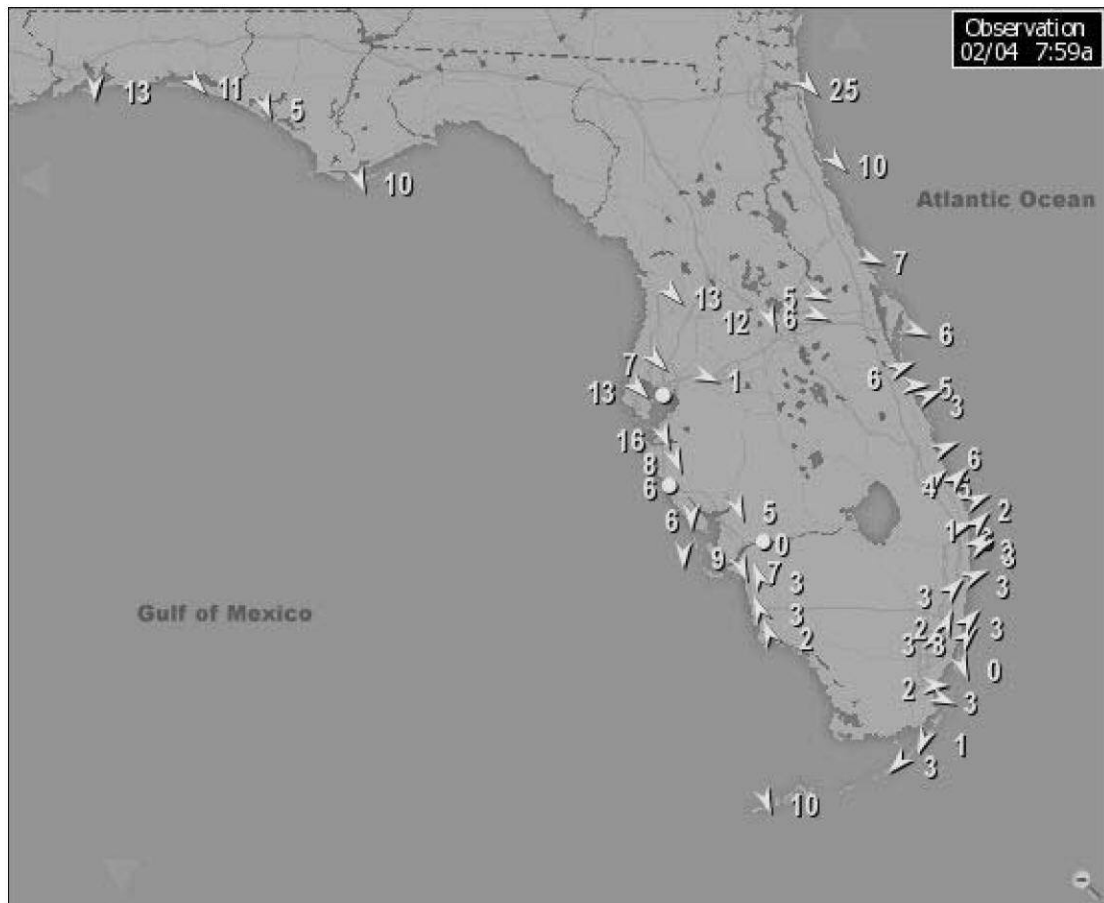
Administrative Activities

Proofreading all materials  
 Taking minutes on conference calls  
 Organizing conference calls and meetings  
 Developing all administrative documents,  
 such as contact lists and invoices  
 Developing budgets  
 Financial management



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### Appendix B. Wind Stations



## **Testing the WeatherFlow instrumentation package for the fixed wind monitoring network**

K. Gurley

2/12/2009

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

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

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

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

### Test procedure

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

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

A series of tests were conducted at wind approach angles from 0 degree (solar panel facing wind, through 235 degrees, at 45 degree intervals. Each test subjected the WF instrumentation package to simulated full-scale hurricane winds a rain for

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less than five minutes. The package was inspected for damage during and after each test. Twice, the water tight casing for the batteries, data storage and cellular hardware was opened between tests to inspect for water infiltration. Video was taken of each test, and numerous digital photographs were taken. Testing was conducted on June 20, 2008.

### Testing results

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

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

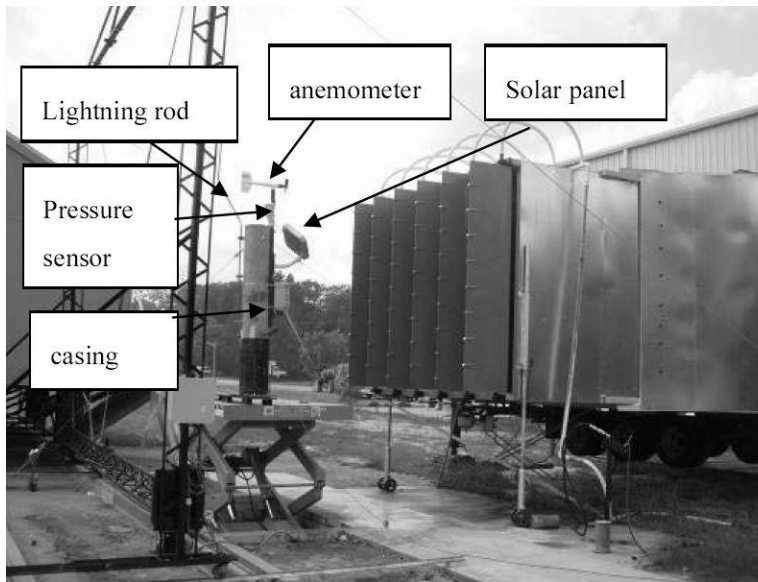
No problems were found regarding water penetration of the water tight enclosure that contains the data storage, batteries, and data transmission hardware.

### Summary and comments

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

See next page for photos

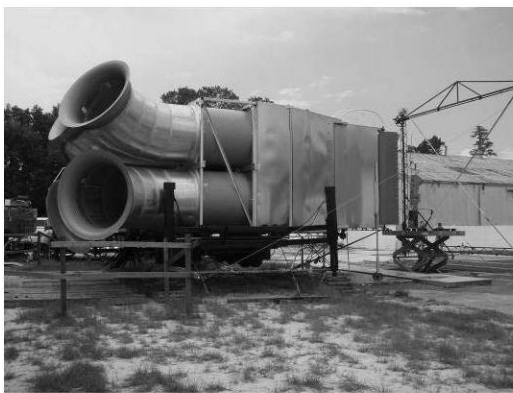
## 2008 Storm Implementation Plan and Annual Reliability Reports



Test subject mounted to wooden pole



Mounted test subject



Simulator and test subject



Test subject during wind/rain test

### 2) Underground Model Testing Progress

#### **Testing of the Methodology for Determining the Costs and Benefits of Undergrounding**

##### *How the Evaluation Was Performed*

Tampa Electric began testing the undergrounding methodology and corresponding computer model developed by Quanta Technology that was delivered to the Research Coordination Steering Committee in May 2008. The methodology developed by Quanta Technology was designed to compare two cases. Typically, the methodology would be applied to a “status quo” case and a proposed undergrounding option. As pointed out in Quanta Technology’s Phase 3 final report, the model can also be used to compare the status quo case to a proposed hardened overhead project where existing overhead facilities are strengthened to better withstand severe weather.

Tampa Electric applied the model to two projects located within the company’s service area. The first project involved hardening an existing overhead distribution circuit to extreme wind loading design criteria. The second project is a pending underground conversion project involving approximately one mile of feeder. The hurricane simulation algorithm in the model was run for the 10,000 year period recommended in Quanta Technology’s Phase 3 Final Report.

Utility and project specific input parameters, where available, were entered into the model, and the sensitivities of the model output results to specific inputs were evaluated to gain a better understanding of the model. The historical and supporting data for the inputs was obtained from Tampa Electric’s Outage Management System, Annual Reliability Performance Statistics, Material Management System, and the currently implemented

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capabilities of the GIS system.

Significant effort was required to develop the input data required for the modeling. The model required over 90 input values to evaluate the two projects. In cases where historical data was not available, engineering evaluation of available internal and industry data was relied upon. Examples of this type of data are Hurricane Restoration Priority and Crew Penalty Factors. Other highly subjective data inputs such as Aesthetics and Improved Property Values were not used for the testing because, as noted in Quanta Technology's Phase 3 final report, these values are intangible and it is typically infeasible to meaningfully quantify them in engineering or economic terms.

Because Tampa Electric has limited experience with damage to underground facilities caused by a storm surge, the storm damage input parameters for the underground equipment reflect the damage to padmounted equipment documented by a utility in an area affected by hurricane Katrina.

### ***Problems/Shortcomings of the Model***

The computer model should be viewed as a complex calculator that produces estimates of costs and benefits associated with the status quo case as compared to an undergrounding or hardening case. The majority of the model inputs are utility and project specific, and expert judgment must be used to select the appropriate inputs for the model to perform a project evaluation.

When historical data is available, the model may require that data to be input in a different format. For instance, the type and quantity of overhead and underground equipment used by the model to proxy the entire utility electrical

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system is limited to a few different types of equipment such as padmounted transformers, cable, and poles. The historical data available, however, includes costs for many additional items required to install and maintain the equipment specified in the model.

It was beyond the scope for Quanta Technology to recommend input parameters and assumptions for analyses of specific projects. As noted in the Phase 2 report, there is little historical data available for estimating many of these input parameters or assumptions. For this reason, reliable input values for many parameters can only be developed as utilities encounter more severe weather and collect the necessary data.

### ***Results***

The model output result for both projects indicated that the annual cost in dollars of the proposed project was higher than the status quo. The difference in the annual cost before and after the project was small, less than one percent of the total project cost in both cases.

### ***Future plans***

Tampa Electric will participate in a model testing workshop in March 2009 to work collaboratively with the other utilities. During the workshop the utilities will have the opportunity to compare results, discuss inconsistencies in the model, and share decisions and methodologies employed to address challenges and fill in data input gaps.

As the implementation and utilization of Tampa Electric's new GIS system progresses, it is expected to provide enhanced information on the performance of the facilities used in the model testing.



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Tampa Electric has established a process for collecting post-storm data and conducting forensic analysis. This data, which is not currently available, can be used to refine storm related equipment damage input parameters for the model.

### **J) Initiative 10: Disaster Preparedness and Recovery Plan**

#### **1) 2008 Emergency Management Summary**

In 2008, TECO Energy and Tampa Electric continued to accomplish numerous milestones in disaster preparedness and recovery planning.

Tampa Electric continued to work with county emergency operation centers in the review of restoration priorities in all the company service areas. To be in line with the public sector, the company made a decision to reverse its critical facility scoring system for 2009; the score will reverse from 5 - 1 to 1 - 5; 1 being the most critical.

For 2008, TECO Energy was also integral to Tampa Electric's disaster preparedness efforts by accomplishing the following activities:

- lead contributor to the new Florida Disaster Kit website ([www.fldisasterkit.org](http://www.fldisasterkit.org)) and developed a preparedness game prototype and provided emergency management and business continuity documents;
- provided a leadership role in infrastructure post disaster redevelopment planning and led public and private sector infrastructure agencies and businesses in the planning process;
- participated in many external storm related exercises; and

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- conducted a myriad of internal exercises and training sessions that included security exercises and drills, oil spill exercises, Finance Department Pandemic Finance Calculator Tabletop Exercise, Logistics Support Unit exercise and training, and a Pandemic Tabletop for ICS leadership.

### **2) 2009 Emergency Management Activities & Budget**

The 2009 Emergency Management budget of \$352,000 will be used on internal and external training and exercises to test plans. In addition, Tampa Electric will continue the following initiatives:

- participation in the Tampa Electric “Right Start” program;
- conduct the Tampa Electric Energy Emergency Preparedness Fair with representation from government agencies;
- participation in the Tampa Bay Regional Planning Council Business Disaster Kit committee that serves the local businesses; and
- develop point of distribution plans in conjunction with the Hillsborough Department of Health to ensure the proper distribution of medication in the event of an emergency.

Tampa Electric has not identified any barriers to success in the above mentioned areas.

### **3) 2008 Energy Delivery Emergency Management**

In 2008, the Energy Delivery department of Tampa Electric was involved in many activities throughout the entire storm season. The department

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facilitated training sessions in various locations to include roles and responsibilities before, during and after storm activation. The Emergency Management Coordinator visited various safety meetings throughout Energy Delivery to discuss employee preparedness and storm assignments.

In March 2008, Energy Delivery conducted reliability line patrols which served a dual purpose of training and patrolling for any potential repair work. Actual repair work was documented and presented for scheduling. Out of the identified work that was scheduled, 54 percent was completed prior to June 1, 2008 with the balance scheduled for completion prior to May 1, 2009.

In May 2008, Energy Delivery facilitated a decentralized tabletop exercise consisting of a review of functional requirements and three storm interval scenarios. The eight hour event was based on a Category 3 hurricane with sustained winds of 129 mph with a storm surge of 15 feet in northern portions of Tampa Bay. Each scenario was preceded by an Energy Delivery conference call that included other key employees across the company. As a result of the exercise, 186 actions items were identified for follow-up and lessons learned. Of these action items, 89 percent have been completed or followed-up with the balance of the items scheduled for completion or follow-up by May 1, 2009.

In 2008, Tampa Electric reviewed sites for incident bases and staging sites which ensure primary and backup locations for distribution, transmission and materials. Throughout Tampa Electric's service territory, the company is constantly developing and maintaining relationships with property owners for potential incident bases and staging sites. Additionally, logistical needs and equipment requirements were reviewed for each incident base site.

Energy Delivery reviewed existing purchase orders and contacted contractors

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who would assist the company with restoration efforts.

In 2008, Energy Delivery participated in numerous conference calls with other Southeastern Electric Exchange utilities regarding tropical storm and ice events. The company's participation in these calls was to offer mutual assistance to a requesting company needing restoration support.

Finally, prior to hurricane season, Energy Delivery management reviewed all employees' storm assignments and communicated roles and expectations. Meetings and training were held as needed.

### **4) 2009 Planned Activities**

Line patrols will again be performed in 2009 for training and work identification. Documentation of the training exercise will be used for real work that is identified during the patrols with a goal of addressing identified issues by peak of hurricane season.

Energy Delivery will continue to pursue additional incident base and staging sites as backup locations. Service Area managers and Incident Base leaders will maintain relationships with property owners of existing sites and locations.

Energy Delivery will conduct a mock storm drill in May 2009 to include key employees across all levels of the company. The plan is to practice a hurricane making landfall at Tampa Bay causing severe flooding in Tampa Electric's service area. Various scenarios will be injected throughout the exercise. Follow-up items and lessons learned will be recorded.

Prior to hurricane season, Energy Delivery management will review all employees' storm assignments and communicate roles and expectations. Meetings, training and exercises will be scheduled at various locations.

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Additionally, employee preparedness will be emphasized prior to storm season via training materials and presentations.

### **K) Storm Hardening Plan Update**

#### **1) Undergrounding Distribution Interstate Crossings**

In 2008, Tampa Electric converted four overhead distribution I-275 interstate crossings to underground. In 2009, four additional I-4 overhead distribution interstate crossings are scheduled to be converted to underground.

#### **2) Testing Network Protectors**

In 2008, fifteen of the eighteen network protectors located in low lying below grade vaults were inspected and tested. Eleven of the fifteen protectors were repaired and four were replaced.

In 2009, the remaining three network protectors are scheduled to be inspected, tested, and repaired, if needed.

#### **3) 4 kV Conversions**

In 2008, construction on the Lois 4 kV conversion was completed with the exception of removing poles with joint use attachment. The completion of this project will result in one company wide distribution voltage that will use standard materials and equipment.

#### **4) Extreme Wind Pilot Projects**

##### **a) Port of Tampa**

In 2008, Tampa Electric completed construction on the one mile section of the phase one extreme wind pilot project at the Port of Tampa.

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Phase two is a two mile section of this pilot project and the engineering design was completed in 2008. Construction is scheduled for completion by the end of 2009. Phase two was delayed slightly for work efficiency purposes.

### **b) Saint Joseph's Hospital**

In 2008, the engineering and a portion of the construction was completed. The remaining construction for this project will be completed by the end of first quarter 2009.

### **5) Underground Equipment Construction Standard**

Tampa Electric has transitioned from its mild steel underground equipment standard to an all stainless steel standard. This transition was phased in as the existing inventory was consumed. In 2008, submersible switchgear from various manufacturers was evaluated. A pilot project to install a submersible switchgear in a flood zone will be completed in 2009.

### **6) Coordination with Third Party Attachments**

Tampa Electric met with third party attachments to discuss the hardening projects identified in the company's Three-Year Storm Hardening Plan. Meetings took place in the field and coordination discussions have been ongoing. Documentation and follow-up are integral to the process. Conflicts that have been brought to Tampa Electric's attention are being reviewed and addressed. Overall, the coordination with third party attachments has been positive and productive.

**SECTION II - Storm Season Ready Status**

**A) Storm Season Ready Status: 2008 Accomplishments**

**1) Transmission**

In 2008, Tampa Electric completed an infrared patrol by helicopter of its entire transmission system. The patrol was completed by a transmission engineer and a certified thermographer. The patrol team performed both a visual review and infrared scan of the entire transmission system and transmission substation equipment. The patrol team focused on bad connections and potential failures.

Ground patrols were completed on the transmission system including all 230kV and 138kV circuits, all critical 69kV circuits and 34 percent of non-critical 69kV circuits. The ground patrols identified access, encroachment and vegetation management issues and facilitated a visual review of the system.

The company continued to execute its six-year transmission structure inspection program with priority given to critical facilities and coastal facilities with progression to inspection of older inland circuits. As inspections were completed, the inspections moved to interconnection circuits, circuits serving co-generators and other inland circuits. The transmission structure inspections took into consideration the condition of each pole and span of wire, including issues with structural hardware such as nuts that have backed off their bolts, corroded equipment, deteriorated appurtenance arms, unbraided conductors and woodpecker holes. This inspection work is completed when the system is under load.

Also in 2008, 775 transmission structures were hardened. This included 649

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wooden structures being replaced with either steel or concrete poles and 126 insulator sets replaced with polymer insulators.

### **2) Vegetation Management**

In 2008, Tampa Electric continued to maximize the effectiveness of its vegetation management efforts relative to storm season. All 230 kV and 138 kV transmission lines as well as critical 69 kV tie lines were patrolled twice. Any vegetative conditions identified from those patrols were either resolved immediately or scheduled for clearing. .

In addition, Tampa Electric Identified its five percent worst performing circuits for patrol. Each of these circuits was patrolled, vegetation issues were identified, and all work was completed prior to the 2008 storm season.

These efforts, along with the continued progression toward a three-year trim cycle (subject to Commission decision in Docket No. 080317-EI) better prepared Tampa Electric for the 2008 storm season.

### **3) Identification & Repair - Circuit Performance Analysis**

Tampa Electric reviewed circuit performance and identified circuits that were targeted for pre-storm season improvements. Circuit patrols were completed on 38 circuits which served as an opportunity to identify overhead line improvements, but also served as a training opportunity for simulating damage assessment and data collection and documentation. These patrols were completed in May and the majority of the work was completed before the peak of the 2008 storm season.

In reviewing pre- and post-circuit patrol and resulting overhead line improvements, the company has recognized a net reliability improvement of 52 percent over 2007 annual performance.



### **4) Updated and Reviewed Circuit Priority**

Tampa Electric has concluded the first phase of the restoration priorities collaborative initiative with Hillsborough County EOC, Hillsborough County Hazard Mitigation group and Hillsborough County Real Estate. The restoration priorities, called Critical Facility Index (“CFI”), will be reviewed on an annual basis and are available on GIS at the county EOC during emergencies. As a result of this initiative, Hillsborough County has expanded its CFI ranking from 3 to 5 and implemented a CFI definition document. To better align the company with the EOCs and improve communications during an emergency, Tampa Electric initiated a project to reverse the internal critical facility storm score system.

Tampa Electric has carried the same CFI initiative to the other counties it serves and will continue to strengthen planning ties with the respective EOCs. In addition, Tampa Electric is the Chair of the Hillsborough County PDRP Infrastructure Repair Technical Advisory Committee. In this role, the company is closely engaged in PDRP planning in Hillsborough and Polk Counties.

### **5) Capacitor Maintenance Program**

In support of maintaining balanced voltage to both the transmission and distribution system and in maintaining the interconnection with Tampa Electric’s neighbors, the company continued its capacitor maintenance program in 2008. The company remotely monitors capacitor banks and when apparent problems are identified, a Tampa Electric field crew is dispatched to resolve any operational problem. In 2008, the company conducted field visits for approximately 950 capacitor banks.

### **6) Increased Equipment Inventory**

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The company reviewed and increased its storm inventory prior to the 2008 hurricane season. The stock increase secured a full four-day supply of overhead distribution materials such as splices, fuses, connectors, service clamps, brackets, wire, poles, transformers, etc. The company has procurement contracts in place that provide for additional supplies being delivered within four days of landfall and it will replenish required stock for the duration of a major restoration event.

### **7) Communication and Coordination with Key EOC and Governmental Organizations**

In 2008, Tampa Electric's communication efforts focused on maintaining vital governmental contacts and participation on standing disaster recovery planning committees. Tampa Electric was invited to participate in several Hillsborough County led initiatives focusing on joint efforts to identify temporary housing, rebuild infrastructure and revive the area's economy in the aftermath of a disaster. These committees are standing committees and will continue to meet during 2009. Tampa Electric also participated in joint mock exercises with Hillsborough County Emergency Management personnel prior to hurricane season.

### **8) Secured and Expanded Incident Bases**

Tampa Electric worked with local business owners and officials to make sure that Tampa Electric had incident bases in each service area. In 2008, the company renewed agreements for primary sites and secured back-up locations as an additional contingency. Incident bases are needed to provide logistical bases for visiting crew operations including staging of materials, trucks, meals and work order assignments.

### **9) Hurricane Preparedness Exercises**

In May 2008, Energy Delivery facilitated a decentralized tabletop exercise

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consisting of a review of functional requirements and three storm interval scenarios. The eight hour event was based on a Category 3 hurricane with sustained winds of 129 mph with a storm surge of 15 feet in northern portions of Tampa Bay. Each scenario was preceded by an Energy Delivery conference call that included other key employees across the company. As a result of the exercise, 186 actions items were identified for follow-up and lessons learned.

### **10)Utilized High Volume Call Answering**

In 2008, Tampa Electric continued to utilize its High Volume Call Answering ("HVCA") system operation. This system enhances customer phone access in reporting outages or emergency conditions during a major weather event. HVCA provides more information and better accuracy for the Outage Management System outage prediction engine and helps to better manage system restoration issues.

### **11)Post-Storm Data Collection and Forensic Analysis Implemented**

In 2008, Tampa Electric continued its relationship with its outside consultant for performing post-storm forensic analysis. This analysis will be completed by gathering a statistically significant representative sample of damage and using this sample to determine root causes of failure during storms.

### **12)Wooden Pole Replacements**

In 2008, Tampa Electric replaced a total of 2,055 wooden distribution poles and 781 wooden transmission poles during the calendar year. The company has implemented a long-term strategy to replace all wooden transmission poles with concrete or steel. In addition, Tampa Electric reinforced 810 wooden distribution poles while making guy and/or anchor repairs at 178 distribution and eight transmission pole locations.

### **13) Storm Hardening**

Fifteen of the eighteen downtown Tampa network protectors in low lying below grade vaults were inspected and tested. Eleven protectors with leak issues were repaired in 2008. The remaining four protectors were replaced in 2008.

In 2008, four overhead distribution interstate crossings over I-275 were converted to underground.

Also in 2008, Tampa Electric completed the phase one rebuilding of the circuits serving the gasoline distribution centers at the Port of Tampa.

Finally, in 2008, the construction for converting the remaining 4 kV distribution circuits to 13 kV was completed.

### **B) Storm Season Ready Status: 2009 Planned Activities**

#### **1) Program Summary**

Tampa Electric's Storm Season Readiness preparation focuses on a number of areas including pre-storm transmission inspections and maintenance, wood pole inspections and replacements, vegetation management, identification and repair of worst performing circuits, capacitor maintenance, local government interaction, increased equipment inventory, circuit priority reviews and hurricane preparation exercises.

#### **2) Transmission Inspections and Maintenance**

In preparation for the 2009 storm season, Tampa Electric will perform above ground inspection of approximately 3,800 transmission structures. Additionally, all 230 kV and 138 kV circuits and all critical 69 kV circuits will be

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patrolled by ground at least once prior to the peak of hurricane season with the remaining transmission circuits being completed by the end of 2009. Tampa Electric plans to change out approximately 584 wood transmission poles throughout the year with steel or concrete structures. Additionally, Tampa Electric intends to replace approximately 99 sets of insulators with polymer insulators with much of this work being completed prior to the peak of hurricane season.

### **3) Pole Inspections**

The 2009 Groundline Pole Inspection Program goal includes 38,895 distribution and 3,736 transmission pole inspections. For 2009, Tampa Electric has set a goal to replace the majority of the 2,111 distribution and 261 transmission poles identified in 2008 for replacement by peak storm season. The future inspections coupled with the company's pole replacement program will enhance the storm resiliency of Tampa Electric's transmission and distribution system.

### **4) Vegetation Management**

For 2009, Tampa Electric will continue to maximize the effectiveness of its vegetation management efforts relative to storm season. All transmission lines and critical 69 kV tie lines will be patrolled twice. Any vegetation issues will be identified for corrective action.

For 2009, Tampa Electric will identify its five percent worst performing circuits for patrol with any corrective actions being completed prior to storm season.

Those efforts will assist Tampa Electric's overall preparation for the 2009 storm season.

### **5) Identification & Repair – Circuit Performance Analysis**

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As was the case during the previous four years, the company has established a target to conduct line patrols on circuits for the purpose of identifying opportunities for overhead line improvements and to practice major storm damage assessment, data collection and documentation. It is expected that overhead line improvements identified during these patrols will be completed before peak storm season.

### **6) Capacitor Maintenance Program**

As previously stated for 2008 accomplishments, the company will continue monitoring and maintaining capacitor banks. In preparation for summer peak loads, and in anticipation of the significant impact of summer storms on workforce availability and capacitor failure rates, Tampa Electric is making an aggressive effort to make capacitor bank repairs during the spring of 2009. The company's goal is to have 90 percent of the banks repaired and on-line by June 2009. Repairs during the summer are generally limited to an as needed basis. Regularly scheduled repairs will continue in the fall as the need and weather permits. In 2009, the company estimates that approximately 900 capacitor banks will be field visited and repaired, as needed.

### **7) Communication with Local Governments**

Tampa Electric has and will continue to meet with various governmental agencies to enhance communication and coordination of emergency and vegetation management as well as provide education on coordinating and facilitating underground conversions.

### **8) Increase Equipment Inventory**

As was the case in 2008, the company will review and increase storm stock in 2009 to ensure a four-day supply of overhead distribution materials such as splices, fuses, connectors, service clamps, brackets, wire, poles,

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transformers, etc. as well as transmission and substation materials. The company will also ensure that procurement contracts are in place to support additional supplies being delivered within four days of landfall and it will replenish required stock for the duration of a major restoration event.

### **9) Circuit Priority Review**

In 2009, Tampa Electric will continue working with all the EOCs in the review and update of the restoration priorities for the areas the company serves.

### **10) Hurricane Preparedness Exercises**

Tampa Electric will be participating in a number of hurricane preparedness exercises including an exercise with the State of Florida and Hillsborough County EOCs. In addition, the company plans to conduct a mock storm drill in May 2009 to include key employees from across all levels of the company. The plan is to practice a hurricane making landfall at Tampa Bay causing severe flooding in the area. One of the objectives of the exercise will be to discuss PDRP planning. Various scenarios will be injected throughout the exercise. Follow-up items and lessons learned will be recorded and, where appropriate, reflected as revisions to the disaster preparedness and recover plan.

### **11) Storm Hardening Plan**

For 2009, four additional overhead distribution circuits crossing I-4 will be converted to underground.

By the end of 2009, the construction to rebuild phase two of the Port of Tampa extreme wind pilot project will be completed.

The other extreme wind pilot project, Saint Joseph Hospital feeder rebuild, is

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on track for completion by the end of first quarter 2009.

Finally, for 2009, the remaining three network protectors are scheduled to be inspected, tested and repaired, if necessary.



**SECTION III - Wood Pole Inspection Program**

**A) Wood Pole Inspection Program**

**1) Program Summary**

Tampa Electric's Wood Pole Groundline Inspection Program is part of a comprehensive program initiated by the Florida Public Service Commission for Florida investor-owned electric utilities to harden the electric system against severe weather and unauthorized and unnoticed non-electric pole attachments which affect the loadings on poles.

This inspection program complies with Order No. PSC-06-0144-PAA-EI, issued February 27, 2006 in Docket No. 060078-EI which requires each investor-owned electric utility to implement an inspection program of its wooden transmission and distribution poles on an eight-year cycle based on the requirements of the NESC. This program provides a systematic identification of poles that require repair or replacement to meet strength requirements of NESC.

**2) Inspection Cycle**

Tampa Electric performs inspection of wooden poles on an eight-year cycle. Tampa Electric has approximately 307,218 wooden poles included in a total in-service pole population of approximately 326,000. Approximately 20,000 are wooden transmission poles and 287,000 are wooden distribution poles. Approximately 12.5 percent of the system will be targeted for inspections annually although the actual number of poles may vary from year to year due to the construction of new transmission and distribution circuits.

**3) Inspection Method and Procedure**

Tampa Electric will utilize three basic inspection procedures for determining the condition of wooden poles. These procedures include a visual inspection,

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sound and bore and excavation if required.

### **a) Inspection in Conjunction with Other Field Work**

As part of day-to-day operations, personnel are sometimes required to climb poles to perform different types of field work. Prior to climbing any pole, personnel will make an assessment of the condition of the pole. This will include a visual check and may include sounding to determine pole integrity. This type of inspection will supplement the systematic inspection approach otherwise outlined in this pole inspection program.

### **b) Visual Inspection**

An initial visual inspection shall be made on all poles from the groundline to the pole top to determine the condition of the pole before any additional inspection work is completed. The visual inspection shall include a review of the pole condition itself and any attachments to the pole for conditions that jeopardize reliability and are in need of replacement, repair or minor follow-up. After a pole has passed the initial visual inspection, the balance of the required inspection method will be performed.

### **c) Sound and Bore**

After passing the visual inspection, the pole shall be sounded to a minimum height of seven feet above the groundline to locate any rotten conditions or pockets of decay inside the pole. Borings shall be made to determine the location and extent of internal decay or voids. All borings shall be plugged with preservative treated wooden dowels. After the pole has passed the sound and bore inspection, an excavation inspection will be performed, if required.

### **d) Excavation**

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For poles requiring excavation, the pole shall be excavated to a minimum depth of 18 inches below the groundline. Any external decay shall be removed to expose the remaining sound wood. The remaining pole strength shall be determined.

For a pole in concrete or pavement where excavation is not possible, Tampa Electric will utilize the Osmose Utility Services, Inc. shell boring technique. This will consist of boring two 3/8 inch holes at a 45-degree angle to a depth of 16 to 18 inches below ground level. The technician will determine the pole strength by the resistance while drilling. Upon withdrawing the drill bit, the technician will examine the condition of the wood shavings to determine whether decay is present. All borings shall be plugged as previously described.

### **e) Hardware Inspection**

The inspector shall inspect all of Tampa Electric's guying, grounding provisions and hardware that is visible from the ground.

### **f) Inspection and Treatment Labeling**

After completion of the groundline inspection, an aluminum tag identifying the contractor and date of inspection shall be attached to the pole above the birthmark. Additionally, a tag shall be attached identifying any preservative treatments applied and the date of application.

### **g) Pole Attachment/Loading Analysis**

In some circumstances, Tampa Electric will conduct a pole loading data collection and analysis as part of the groundline inspection. The analysis will ensure that the condition of the pole meets the requirements in Table 261-1A of the NESC. The analysis will not be performed on poles having only Tampa Electric attachments since these facilities were addressed in

the original design.

### **h) Data Collection**

The collected data shall be managed in a database and include information related to pole class, material, vintage, location, joint use attachments, and any pole deficiencies that required follow-up actions, if any.

### **4) Disposition of Poles**

Poles with early stage decay that do not require remediation to meet the NESC strength requirements shall be treated with an appropriate preservative treatment. Poles with moderate decay that have substantial sound wood shall be considered for reinforcement. Analysis shall be performed to determine if reinforcement will bring the deficient pole into compliance with the requirements of the NESC. If it is determined that the pole can be reinforced, the pole shall be treated with an appropriate preservative treatment and reinforced. Poles with advanced decay shall fail the inspection and be replaced.

### **5) Routing of Inspections**

#### **a) Distribution**

Tampa Electric's distribution system is a radial system with many laterals and service drops. The company has determined the most cost-effective and reasonable approach for routing the work of the annual inspection program is by geographic location. Therefore, inspectors will be given an area that is defined by specific boundaries and distribution poles within that area will be systematically inspected.

#### **b) Transmission**

Tampa Electric's transmission system is primarily a network system with

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few laterals. The company has determined the most cost-effective and reasonable approach for routing the inspection work to be on a circuit basis. Therefore, annual inspections will be performed sequentially from substation to substation completing an entire circuit in the process.

### **6) Shared Poles**

Tampa Electric supports the Commission's effort to establish pole inspection requirements on the owners of all utility poles. Tampa Electric will coordinate with third party owners of utility poles that carry the company's facilities. With regard to the third party's inspection process, the company will rely upon the third party's inspection requirements and share data requested by the third party to be utilized in their inspection procedure. Tampa Electric will cooperate, as requested, in the work associated with pole replacement where joint use exists.

### **7) Standards Superseding NESC Requirements**

Tampa Electric's Wood Pole Groundline Inspection Program complies with NESC requirements.

### **8) Pole Inspection Program Performance Verification**

Qualified Tampa Electric personnel or an independent contractor will conduct a quality control audit on the pole inspection work to verify compliance with the pole inspection services contract. This quality control audit shall consist of selecting random poles, determining the proper course of action per the inspection services contract and comparing the independent audit recommendation against the proposed recommendation by the pole inspection service.

### **9) Reporting**

Tampa Electric will file an annual Pole Inspection Report by March 1 of each

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year in full accordance with the reporting requirements set forth in Docket No. 070634-EI, Order No. PSC-07-0918-PAA-PU, issued November 14, 2007. The report will contain the methods used to determine the strength and structural integrity of wooden poles, the selection criteria for inspected poles, a summary of the results of the inspections, the cause(s) of inspection failures, and the corrective action taken for the failures.

### **10)2008 Accomplishments**

Tampa Electric's Groundline Pole Inspection Program was conducted by three contracted crews and one supervisor who inspected a total of 42,075 poles which was 458 poles over planned inspections. The pole failure rate for distribution was 7.6 percent due to the vintage of poles inspected. Of these failures, 2.1 percent were reinforced; therefore, the overall distribution wooden pole replacement rate was 5.5 percent. The pole failure rate for transmission poles was 6.8 percent. Tampa Electric has elected not to perform any reinforcements on transmission poles. Tampa Electric's spending levels for the Groundline Pole Inspection Program, which included distribution pole reinforcements, exceeded \$1.8 million.

The 2008 Groundline Pole Inspection Program results include:

38,205 planned distribution pole inspections with 38,202 completed  
3,412 planned transmission poles inspections with 3,873 completed  
41,617 planned transmission & distribution groundline pole inspections with a total of 42,075 completed

#### **Expenditures for the 2008 Groundline Pole Inspection Program include:**

Distribution groundline pole inspections - \$1.3 million  
Transmission groundline pole inspections - \$102,100

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Distribution pole reinforcements - \$344,700

Inspection-related distribution maintenance - \$76,300

### **11)2009 Activities and Budget Levels**

For 2009, Tampa Electric started the year with three contractor crews and one supervisor in place. Pole inspection targets by service area were established with a goal of completing approximately 12.5 percent of the entire system in 2009.

The 2009 Groundline Pole Inspection Program goals include:

38,895 distribution pole inspections

3,736 transmission pole inspections

42,631 total transmission & distribution groundline pole inspections

Established funding levels for the 2009 Groundline Pole Inspection Program include:

Distribution groundline pole inspections - \$1.3 million

Transmission groundline pole inspections - \$141,000

Distribution pole reinforcements - \$511,100

Inspection-related distribution maintenance - \$42,800

Tampa Electric has set a goal to replace the majority of 2,111 distribution and 261 transmission poles that were identified from the 2008 Pole Inspections for replacement by peak storm season this year. Tampa Electric's Groundline Inspection Program strategy takes a balanced approach and has produced excellent results in a cost effective manner. The future inspections coupled with its pole replacement program will enhance the storm resilience of Tampa Electric's transmission and distribution poles.

### **12)Chromated Copper Arsenate Pole Inspections**

In Docket No. 080219-EI, Order No. PSC-08-0615-PAA-EI, issued September 28, 2008 the Florida Public Service Commission approved a modification to Tampa Electric's Wood Pole Inspection Program involving chromated copper arsenate ("CCA") poles. Specifically, the modification requires CCA treated poles less than 16 years of age to be sound and selectively bored. Selective boring shall be performed on poles suspected of internal decay. Additionally, one percent of the annual number of CCA treated poles inspected less than 16 years of age shall be excavated to validate this inspection method. Finally, all CCA treated poles over 16 years of age shall be excavated.



**SECTION IV - Rule 25-6.0455 F.A.C.**

**A) 2008 Reliability Performance**

**1) Overview**

Tampa Electric's 2008 distribution reliability indices, both adjusted and actual, represented mixed results in comparison to 2007. While the company saw an increase in the momentary average interruption frequency, improved performance was recognized in the system average interruption duration, system average interruption frequency, customer average interruption duration and average duration of outage events. Reduced outage duration was realized in spite of the fact that the adjusted number of outages increased in 2008 by 101 over 2007 adjusted numbers.

**2) Summary**

Tampa Electric's Adjusted 2008 System Average Interruption Duration Index ("SAIDI") decreased by 11.25 minutes or 14.65 percent (16.30 minutes or 19.70 percent decrease – 2008 actual) over 2007. Customer Average Interruption Duration Index ("CAIDI") saw a 2.02 minute drop over 2007 representing a 2.68 percent reduction (4.8 minutes or 6.46 percent reduction – 2008 actual). System Average Interruption Frequency Index ("SAIFI") decreased by 0.13 average events or 12.75 percent (0.16 average events or 14.15 percent decrease – 2008 actual), while Momentary Average Interruption Frequency Index Event ("MIAFIE") increased by 0.11 events or a 0.79 percent increase over 2007 (0.43 events or 3.01 percent increase – 2008 actual).

As noted above, Tampa Electric experienced a net increase of 106 outages in 2008 over 2007 results. The primary cause associated with a total increase of 688 was attributed as follows:

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- Animals - 544
- Bad connection - 59
- Other weather - 67
- Down wire - 15
- Defective equipment - 3

The primary causes associated with a total decrease of 582 are attributed as follows:

- Unknown outages - 24
- Lightning related - 351
- Vegetation - 51
- Electrical - 115
- Vehicle - 41
- All remaining causes - 5

Although overall outages were up in 2008 in comparison to 2007, the total number of outages in comparison to the last five year average is down by 2.2 percent or 228 outage events. Five-year average outage causes in all categories are down in comparison to 2008 totals with the exception of animals, bad connection, defective equipment, down wire and vegetation which are up by 19.17 percent, 2.29 percent, 30.03 percent, 12.63 percent, and 8.23 percent, respectively. The company does attribute some increase to the categories due to an overall reduction of unknown outages by 280 (28.47 percent) events during this period.

Tampa Electric currently tracks outage records in its outage database according to date, duration, customers affected, cause, equipment-type, associated field reports, breakers operations, etc., and uses this information to track and report inter-departmental, inter-company and external regulatory

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requests as required.

Tampa Electric management continues reviewing system performance and related metrics on a daily basis. Primary areas of focus included incremental and year-to-date daily SAIDI performance for transmission, substation and distribution, year-to-date MAIFIE and associated breaker operations, customer outages by system and region and major unplanned outages. In addition, management reviews the status of de-energized underground cables, oil circuit reclosers and street lights previously identified as needing maintenance.

In 2008, Tampa Electric management has continued its increased focus on feeder restoration activity. As part of the daily review, feeder outage activity was reported and reviewed. The company identified areas for improving its response to feeder outages and installed fault indicators on a significant number of circuits to assist in the identification of faults. Where outage duration exceeded acceptable thresholds, management reviewed incidents in pursuit of continued improvements with response time.

In addition to reviewing daily performance as noted above, the company analyzes distribution circuit performance, including feeders represented on the three percent feeder list through a number of different ongoing processes. These processes include tree trimming analysis and circuit selection, circuit analysis and prioritized pre-storm season circuit patrols and preventative maintenance, targeted infrared line patrols as well as through the process of a cross-functional team which reviews system reliability performance and identifies preventative maintenance activities.

### **3) Conclusion**

In 2008, Tampa Electric customers experienced reduced average interruption

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duration compared to previous years. This was accomplished through improved processes associated with feeder outage response and various equipment replacement despite an increased number of outages as reported.

### **B) Generation Events – Adjustments**

Tampa Electric experienced no outages due to generation events that would have impacted distribution reliability; as a result, there were no exclusions in the company's 2008 Annual Distribution Reliability Report related to generation outage events.

### **C) Transmission Events – Adjustments**

#### **1) Transmission Outage Summary**

In 2008, there were 30 transmission outages that affected customers. This included 17 outages that were due to equipment failures or equipment failures that extended outages, four outages due to vehicle collisions, two outages due to bird nest debris, two vegetation related outages, one outage due to insufficient clearance and four outages where the cause was not determined. A total of 3,239,928 Customer Minutes of Interruption and 127,335 Customer Interruptions were excluded from the 2008 Annual Distribution Reliability Report per Rule 25-6.0455.

#### **2) Equipment Failure Outages**

There were five outages attributed to crossarm or insulator failures. The repair or replacement of crossarms and insulators having identified deficiencies was prioritized.

There were five outages attributed to static wire failures. Above Ground Inspections will continue to identify static wire deficiencies so that repairs can be made prior to failure.

On separate occasions, momentary outages resulted in extended outages

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due to equipment failures. One outage is believed to have originated with a lightning strike but was extended due to a circuit breaker failure. The origination of the other outage was not determined but resulted in an extended outage due to loss of supervisory control attributed to a malfunctioning remote terminal unit ("RTU"). Inspection and maintenance programs will be continued in order to minimize extended outages.

Two outages were due to failing substation lightning arresters. The arresters were replaced. Substation inspections will continue to identify deficiencies.

### **3) Vehicle Collision Outages**

There were four outages attributed to structure failure due to vehicle collisions. No action items were identified.

### **4) Bird Nest Debris Outages**

Two outages were due to debris from bird nests contacting the conductor. Above Ground Inspections and Ground Patrols will continue to identify bird nest and potentially hazardous debris. Appropriate steps are taken, per Tampa Electric's Avian Program, such as trimming nest and erecting nesting platforms to minimize outages and hazards to wildlife.

### **5) Vegetation Related Outages**

Two outages were suspected to be vegetation related. One outage was believed to be due to a vine displaced by high winds that resulted in an insulator flashover and the other outage began at the distribution level with the resulting fault overreaching to the transmission. Vegetation Management Patrols and Ground Patrols will continue to identify encroaching vegetation.

### **6) Clearance Outages**

One outage was caused by the contraction of a phase conductor due to cold

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weather. This placed the ceramic bell insulators in an uplift condition resulting in insufficient clearance between the energized conductor and crossarm brace. The pole was reframed with horizontal line post insulators alleviating the uplift condition.

### 7) Cause Not Determined Outages

There were three outages where a cause was not determined. No action items were identified.

### 8) Transmission Outage Detail

#### January 2008

**Date:** 1/29/08

**Circuit:** 66652

**Customers Affected:** 2,321      **SAIDI Impact:** 8 seconds

**Discussion:** Car hit pole causing damage to the insulators. Damage to the pole was insignificant. Crew replaced crossarm and insulators with horizontal line post insulators.

**Event:** Localized

#### February 2008 – No Transmission Events

(No discussion)

#### March 2008

**Date:** 3/5/08

**Circuit:** 66407

**Customers Affected:** 2,139      **SAIDI Impact:** <1 second

**Discussion:** Crossarm failed due to tracking. Crew replaced failed crossarm and insulators with horizontal line post insulators.

**Event:** Localized

**Date:** 3/6/08

**Circuit:** 66411

**Customers Affected:** 209      **SAIDI Impact:** 2 seconds

**Discussion:** Outage was due to debris from a bird nest contacting the transmission conductor. Crew removed debris and trimmed the nest.

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**Event:** Localized

**Date:** 3/12/08

**Circuit:** 66034

**Customers Affected:** 9,903

**SAIDI Impact:** 4.5 seconds

**Discussion:** Car hit pole causing the outage. Crew replaced pole.

**Event:** Localized

### April 2008

**Date:** 4/2/08

**Circuit:** 66033, 66088

**Customers Affected:** 13,089

**SAIDI Impact:** 5 seconds

**Discussion:** The initial circuit breaker operation was believed to be caused by a lightning strike but an extended outage resulted due to failure of the circuit breaker. Crew replaced circuit breaker.

**Event:** Localized

**Date:** 4/13/08

**Circuit:** 66067

**Customers Affected:** 1,315

**SAIDI Impact:** <1 second

**Discussion:** Circuit was patrolled but no cause was determined. Bad weather was reported in the area.

**Event:** Localized

### May 2008

**Date:** 5/9/08

**Circuit:** 66021

**Customers Affected:** 951

**SAIDI Impact:** 4 seconds

**Discussion:** Patrolman found static wire down. Crew cleared the static wire.

**Event:** Localized

### June 2008

**Date:** 6/9/08

**Circuit:** 66032

**Customers Affected:** 5,952

**SAIDI Impact:** 32 seconds

**Discussion:** Patrolman found static wire down. Crew cleared the static wire.

**Event:** Localized

**Date:** 6/13/08

**Circuit:** 66004

**Customers Affected:** 12,023

**SAIDI Impact:** 2.5 seconds

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**Discussion:** Patrolman found broken crossarm. Crew replaced failed crossarm and insulators with horizontal line post insulators.

**Date:** 6/13/08 **Circuit:** 66411  
**Customers Affected:** 452 **SAIDI Impact:** 3 seconds  
**Discussion:** Outage was due to debris from a bird nest contacting the transmission conductor. Crew removed debris and trimmed the nest.  
**Event:** Localized

**Date:** 6/18/08 **Circuit:** 66033, 66088  
**Customers Affected:** 6,478 **SAIDI Impact:** 1.5 seconds  
**Discussion:** Patrolman found broken crossarm. Crew replaced failed crossarm and insulators with horizontal line post insulators.  
**Event:** Localized

**Date:** 6/19/08 **Circuit:** 66039, 66040  
**Customers Affected:** 7,459 **SAIDI Impact:** <1 second  
**Discussion:** Circuit was patrolled but no cause was determined. Bad weather was reported in the area.  
**Event:** Localized

**Date:** 6/21/08 **Circuit:** 66411  
**Customers Affected:** 460 **SAIDI Impact:** <1 second  
**Discussion:** Circuit was patrolled but no cause was determined. Bad weather was reported in the area.  
**Event:** Localized

### July 2008

**Date:** 7/6/08 **Circuit:** 66007  
**Customers Affected:** 451 **SAIDI Impact:** 5.5 seconds  
**Discussion:** Patrolman found static wire down. Crew cleared the static wire.  
**Event:** Localized

**Date:** 7/6/08 **Circuit:** 66017, 66043



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**Customers Affected:** 6,518      **SAIDI Impact:** 32 seconds  
**Discussion:** Patrolman found static wire down. Bad weather was reported in the area. Crew cleared the static wire.  
**Event:** Localized

**Date:** 7/9/08      **Circuit:** 66088  
**Customers Affected:** 1,139      **SAIDI Impact:** 10 seconds  
**Discussion:** Patrolman found static wire down. Bad weather was reported in the area. Crew cleared the static wire.  
**Event:** Localized

**Date:** 7/22/08      **Circuit:** 66024  
**Customers Affected:** 2,272      **SAIDI Impact:** 11 seconds  
**Discussion:** One pole of a 3-pole transmission structure on circuit 230010 broke due to woodpecker damage. This caused the arms of the adjacent lattice tower structure to fail dropping the conductors of 230010 across circuit 66024.  
**Event:** Localized

**Date:** 7/25/08      **Circuit:** 66426  
**Customers Affected:** 3,143      **SAIDI Impact:** 24 seconds  
**Discussion:** Circuit was patrolled but no cause was determined. Bad weather was reported in the area. The outage was extended due to an unresponsive RTU preventing the from being re-energized.  
**Event:** Localized

### August 2008

**Date:** 8/5/08      **Circuit:** 66413  
**Customers Affected:** 3,690      **SAIDI Impact:** 1 second  
**Discussion:** Circuit was patrolled but no cause was determined.  
**Event:** Localized

**Date:** 8/12/08      **Circuit:** 66043  
**Customers Affected:** 929      **SAIDI Impact:** 3 seconds

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**Discussion:** Lightning arrester at Clearview Substation failed causing outage. Crew replaced lightning arrester.

**Event:** Localized

**Date:** 8/15/08

**Circuit:** 66017

**Customers Affected:** 7,187 **SAIDI Impact:** 2 seconds

**Discussion:** Car hit pole causing damage to the insulators on the structure one span to the north. Damage to the pole was insignificant. Crew replaced crossarm and insulators with horizontal line post insulators.

**Event:** Localized

**Date:** 8/19/08

**Circuit:** 66407

**Customers Affected:** 2,116 **SAIDI Impact:** 1 second

**Discussion:** Patrolman found broken crossarm. Crew replaced failed crossarm and insulators with horizontal line post insulators.

**Event:** Localized

**Date:** 8/19/08

**Circuit:** 66603

**Customers Affected:** 4,748 **SAIDI Impact:** 2 seconds

**Discussion:** Patrolman found broken crossarm. Crew replaced failed crossarm and insulators with horizontal line post insulators.

**Event:** Localized

**Date:** 8/22/08

**Circuit:** 66043

**Customers Affected:** 593 **SAIDI Impact:** <1 second

**Discussion:** Lightning arrester at Clearview Substation failed causing outage. Crew replaced lightning arrester.

**Event:** Localized

**Date:** 8/25/08

**Circuit:** 66001

**Customers Affected:** 4,876 **SAIDI Impact:** 2 seconds

**Discussion:** A problem with the pole top switch that would not close completely caused the outage. Crew performed maintenance on switch.

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**Event:** Localized

### September 2008 – No Transmission Events

(No discussion)

### October 2008

**Date:** 10/29/08

**Circuit:** 66016

**Customers Affected:** 13,779      **SAIDI Impact:** 27 seconds

**Discussion:** Outage was caused by a phase conductor contracting due to cold weather and placing the ceramic bell insulators in an uplift condition. This resulted in insufficient clearance between the energized conductor and crossarm brace. The pole was reframed with horizontal line post insulators to alleviate the uplift condition.

**Event:** Localized

### November 2008

**Date:** 11/30/08

**Circuit:** 66008, 66060, 66068

**Customers Affected:** 3,705      **SAIDI Impact:** <1 second

**Discussion:** Insulator flashed over causing outage. Flash was possibly due to a vine being displaced by high winds. Crew trimmed vine.

**Event:** Localized

### December 2008

**Date:** 12/16/08

**Circuit:** 66407

**Customers Affected:** 2,140      **SAIDI Impact:** <1 second

**Discussion:** Patrolman found broken insulator. Crew replaced failed insulators with horizontal line post insulators.

**Event:** Localized

**Date:** 12/22/08

**Circuit:** 66061

**Customers Affected:** 376      **SAIDI Impact:** 1 second

**Discussion:** Vine contacted the underbuilt distribution circuit. The resulting fault overreached to the transmission. Crew trimmed the vine.

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**Event:** Localized

**Date:** 12/28/08

**Circuit:** 66036

**Customers Affected:** 7,222

**SAIDI Impact:** 104.5 seconds

**Discussion:** Car hit pole causing the outage. Crew replaced pole.

**Event:** Localized

### D) Extreme Weather

Tampa Electric experienced no extreme weather events in 2008.

### E) Other Distribution – Adjustments

In 2008, there were 93 “Other Distribution” outages that affected customers. A total of 570,773 Customer Minutes of Interruption and 39,988 Customer Interruptions were excluded from the 2008 Annual Distribution Reliability Report per Rule 25-6.0455. All outages were attributed to planned events as noted within the 2008 Adjustments: Other Distribution in Appendix.

### F) Distribution Substation

#### 1) 2008 Distribution Substation Adjustments

In 2008, there were 194 “Distribution Substation” outages that affected customers. A total of 8,560,460 Customer Minutes of Interruption and 187,630 Customer Interruptions were excluded from the 2008 Annual Distribution Reliability Report per Rule 25-6.0455. All outages were attributed to substation equipment as noted within the 2008 Adjustments: Distribution Substation in Appendix (that also includes the February 26, 2008 underfrequency event).

#### 2) Patterns and Trends - Distribution Substation Reliability Performance

From 2003 through 2008, outages due to animal contact have contributed the most to SAIDI. Since 2004, animal protection has been installed in all new substation construction and substation upgrade projects. For 2008, animal

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protection was installed in ten substations. Efforts toward animal protection have led to a downward trend in outages due to animal contact as shown in Exhibit 7 of this section.

Starting in 2007, many outages that would have previously been classified as unknown have been grouped with breaker mechanism problems resulting in an increase in breaker related SAIDI. Breaker mechanism SAIDI is now the second largest contributor to SAIDI.

Breakers that trip without reclosing are inspected, cleaned, lubricated and tested before returning to service. The reclosing relays are then tested in the breaker. The most common causes have been defective closing coils, reclosing relays, auxiliary switches and mechanism problems. Analysis of outages has revealed intermittent reclosing problems in specific types of breaker mechanisms. As a result a breaker change-out program has been initiated. Fourteen breakers were changed out in 2008 and 36 more are planned for 2009. Investigation into the root cause of these mechanism problems is ongoing.

In 2008, outages due to protective relay failure were the third leading contributor to SAIDI. Failed underfrequency and reclosing relays resulted in a majority of the relay related SAIDI impact. New installations use multifunction microprocessor based feeder relays for reclosing and underfrequency protection. The new relays are more reliable than the older static and electromechanical relays. Self-diagnostic features allow earlier detection of failures in new relays. Moving from a common station underfrequency relay to feeder based underfrequency protection minimizes the effect of a relay misoperation to a single feeder instead of an entire substation. Part of the breaker change-out program previously mentioned is to upgrade the relays to newer multifunction microprocessor based relays. Relay related SAIDI has

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continued a downward trend in 2008 as shown in Exhibit 9 of this section.

### **3) Tracking Distribution Substation Reliability**

All major substation equipment nameplate data and maintenance activities are tracked in an asset management database. All work orders, findings, and corrective actions related to substation outages are added to the asset management database. Substation operations supervisors review the maintenance and outage history of equipment involved in outages on a daily basis.

### **4) Process to Promote Substation Reliability**

The following are used to determine the actions to promote substation reliability:

- Quarterly inspections of all substations
- Root cause analysis of each outage
- Annual review of all substation outages

Tampa Electric findings support the following ongoing activities:

- Review of all breaker misoperations
- Install animal protection in substations
- Change out breaker mechanisms identified with chronic problems
- Install microprocessor based relays for reclosing in all new construction and upgrade projects
- Replace station wide static underfrequency relays with feeder based microprocessor underfrequency relays in all new construction projects

In addition to the above activities, Tampa Electric has implemented automatic bus restoration schemes in select stations with multiple transformers.

## 2008 Storm Implementation Plan and Annual Reliability Reports

The tables and exhibits that follow provide three performance results for distribution substations.

**Table 2: Distribution Substation Inspections by Year**

<b>Year</b>	<b>Number of Distribution Substation Inspections</b>
2004	366
2005	401
2006	417
2007	394
2008	378

## 2008 Storm Implementation Plan and Annual Reliability Reports

Exhibit 1: 2008 Distribution Substation Outages

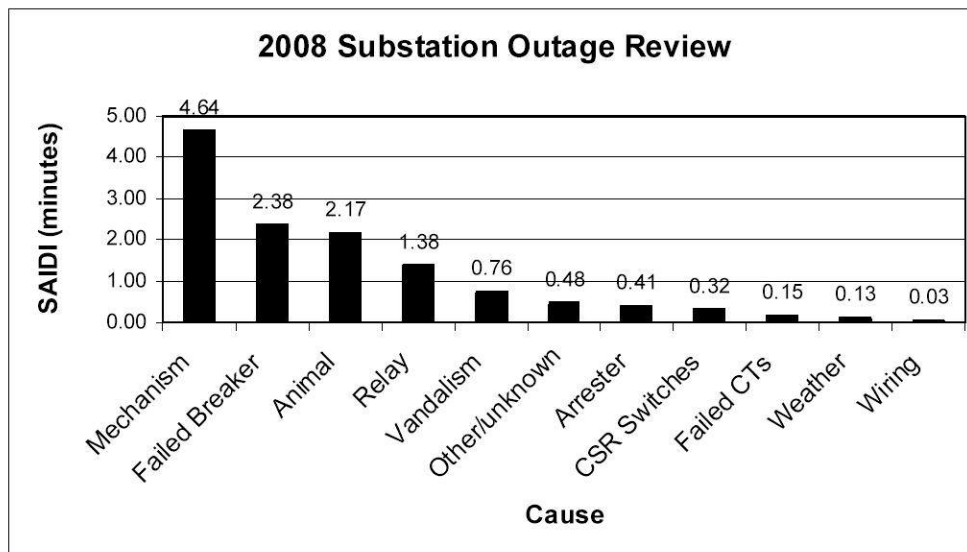
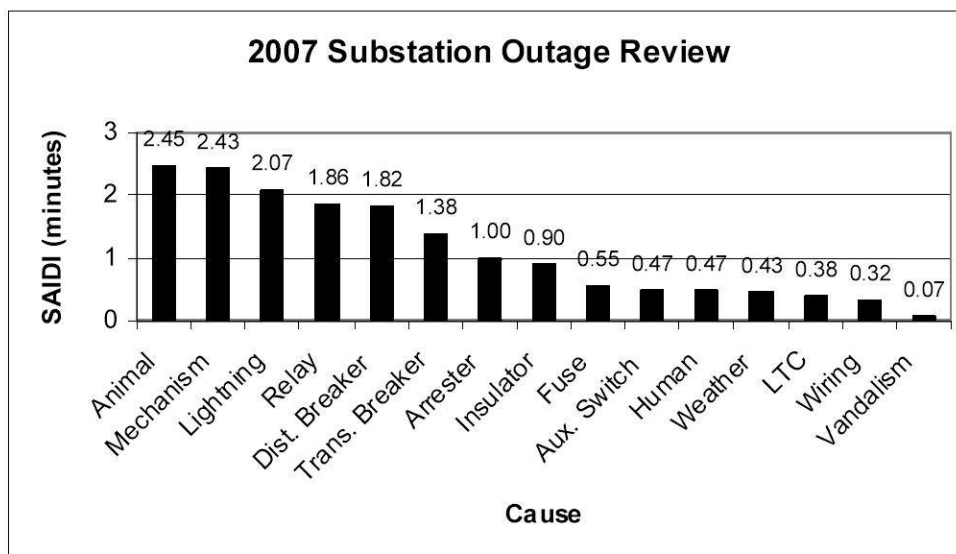


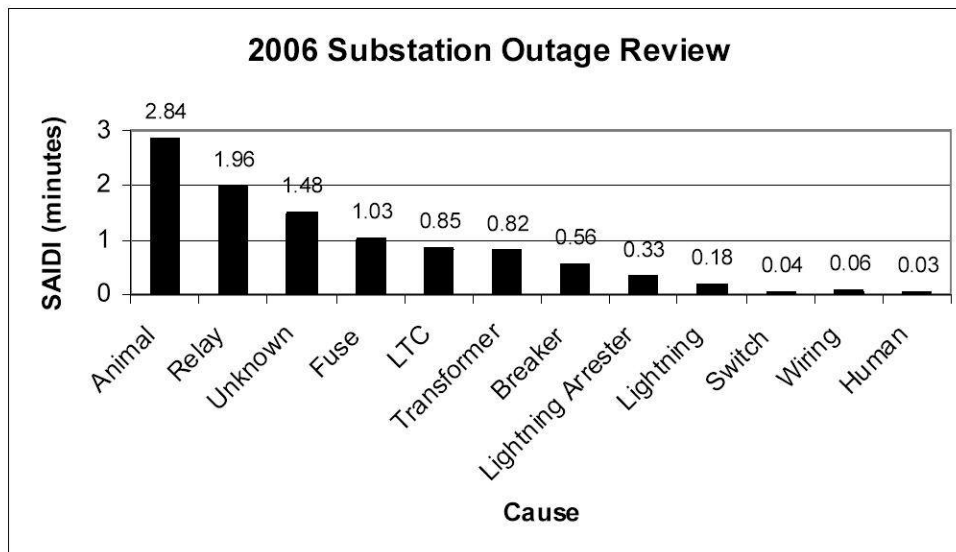
Exhibit 2: 2007 Distribution Substation Outages





## 2008 Storm Implementation Plan and Annual Reliability Reports

**Exhibit 3: 2006 Distribution Substation Outages**



**Exhibit 4: 2005 Distribution Substation Outages**

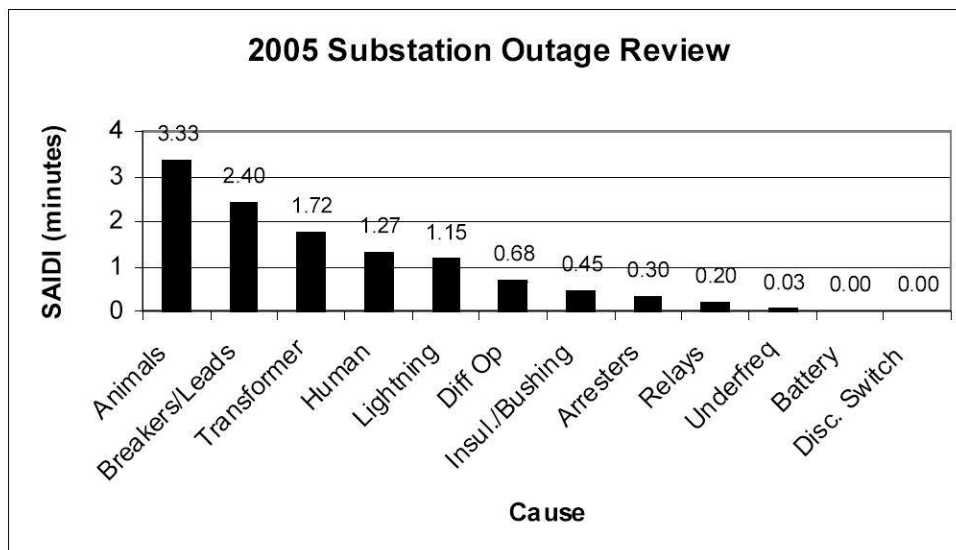


Exhibit 5: 2004 Distribution Substation Outages

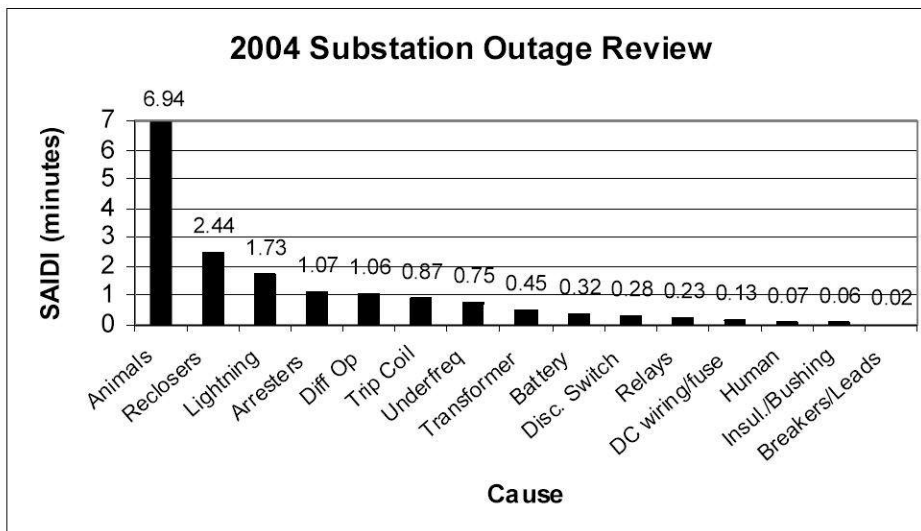


Exhibit 6: 2003 Distribution Substation Outages

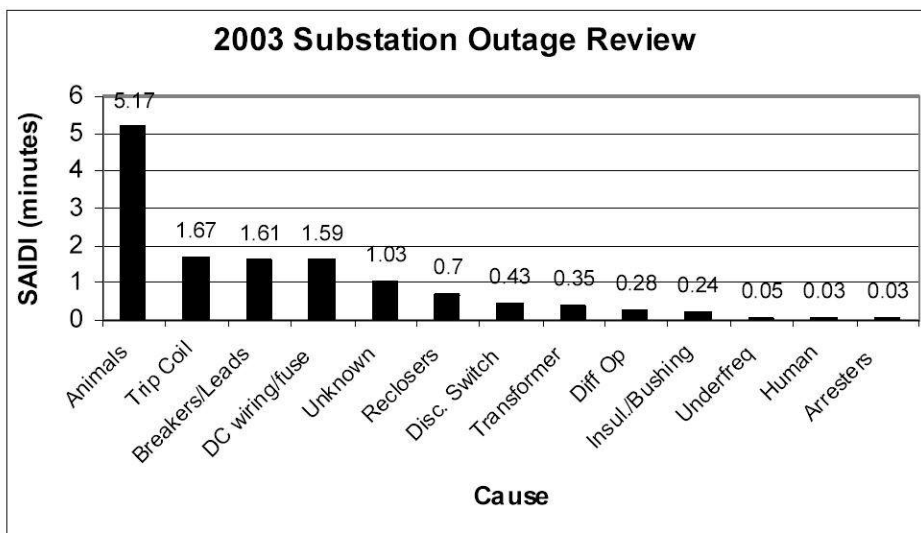


Exhibit 7: Substation Outages due to Animal Contact

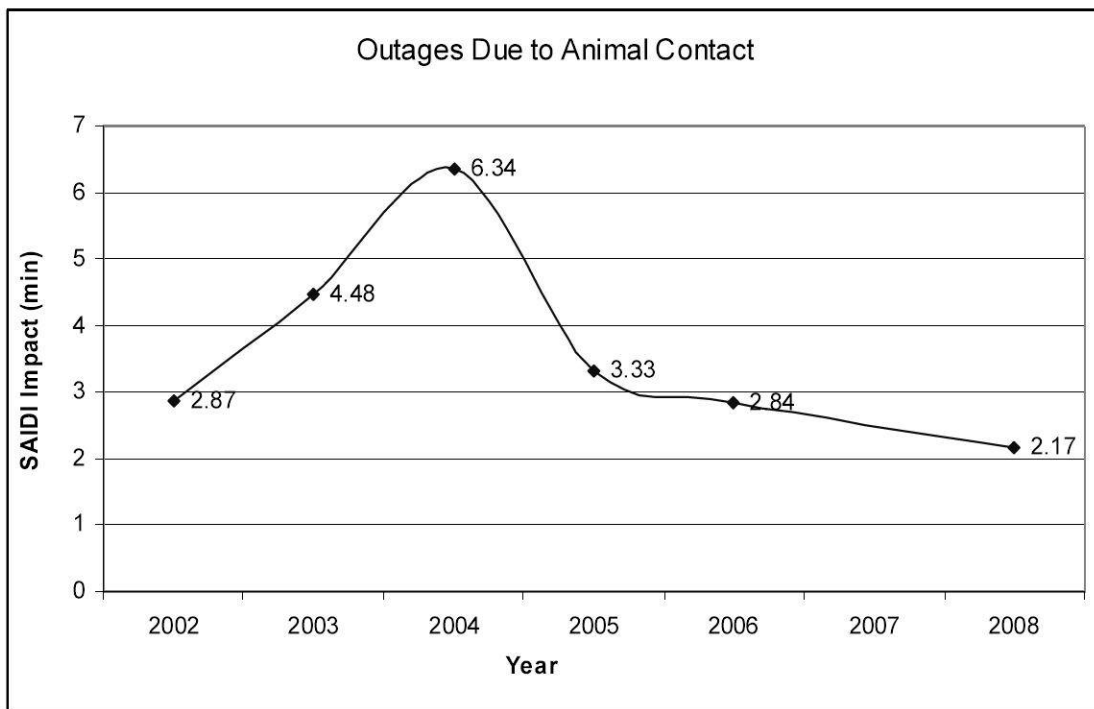


Exhibit 8: Substation Outages due to Breaker Mechanism Problem

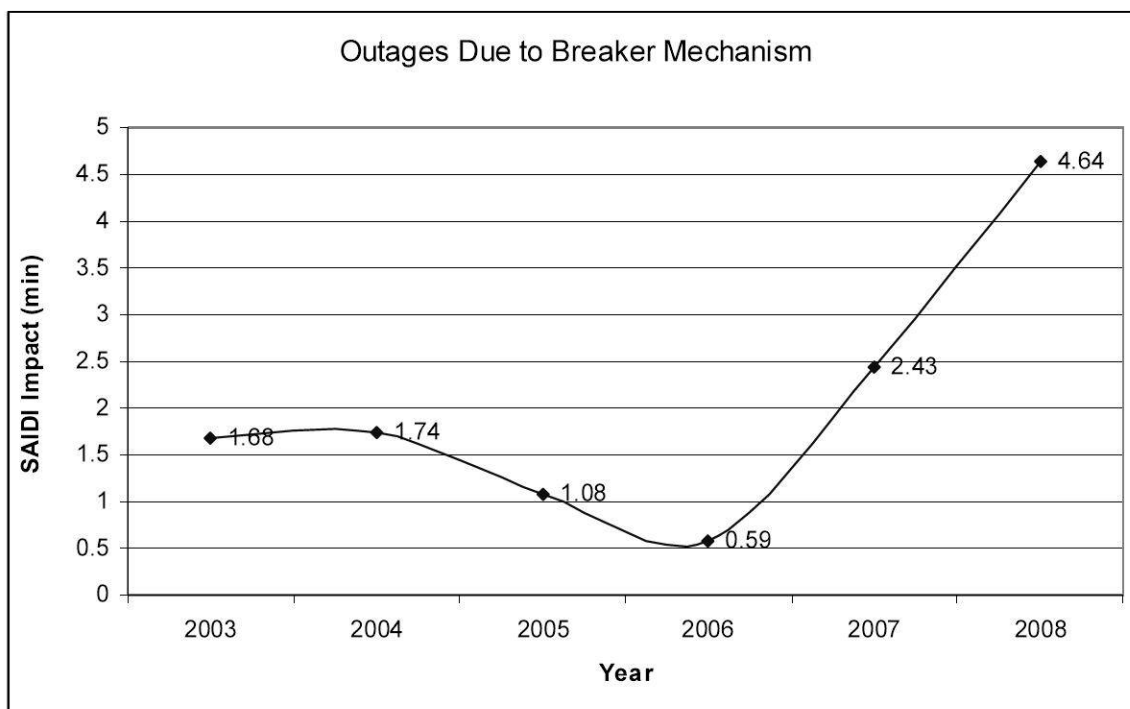
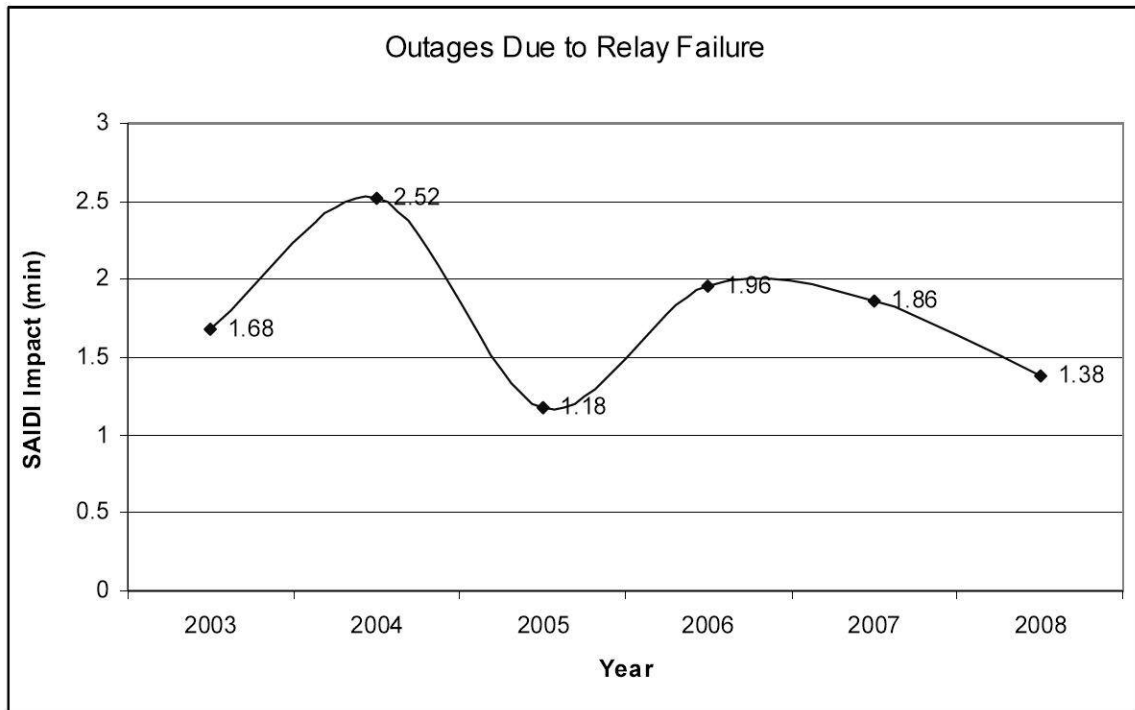


Exhibit 9: Substation Outages due to Relay Failure



## 2008 Storm Implementation Plan and Annual Reliability Reports

### G) 2008 Adjusted Distribution Reliability

#### 1) Causes of Outages

**Table 3: Cause of Outage Events by Year**

<b>Cause of Outage Events</b>	<b>2,004</b>	<b>2,005</b>	<b>2,006</b>	<b>2,007</b>	<b>2,008</b>
Vegetation	1,919	1,797	1,564	2,086	2,035
Lightning	2,284	1,962	1,723	1,921	1,570
Animals	2,087	1,742	1,656	1,708	2,252
Electrical	965	1,065	954	979	864
Unknown	1,349	1,243	895	727	703
Bad Connection	702	917	704	726	785
Other Weather	977	930	703	578	645
Defective Equipment	213	291	441	508	511
Vehicle	235	349	334	261	220
Down Wire	192	230	237	249	264
All Remaining Causes	268	347	264	254	249
Down Wire	192	230	237	249	264
<b>System Totals</b>	<b>11,191</b>	<b>10,873</b>	<b>9,475</b>	<b>9,997</b>	<b>10,098</b>

#### 2) Three Percent Feeder

In reviewing both actual and adjusted Three Percent Feeder Lists (Forms 102 and 103, Part II) included within the Appendix of this report, six circuits have been identified to have been listed once before 2008 during the last five years. These circuits include Mulberry 13007, Manhattan 13112, Dade City 13330, Turkey Ford 13679, Buckhorn 13709 and Casey Road 13748. Finally, during the last five years, Polk Power 14050 was identified as having been listed on the actual and adjusted Three Percent Feeder Lists in 2006 and 2007.

Actual and Adjusted events for Mulberry 13007 included four circuit outages

## **2008 Storm Implementation Plan and Annual Reliability Reports**

as reported. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, replacement of overhead line sections and tree trimming.

Actual and Adjusted events for Manhattan 13112 included three circuit outages as reported. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, circuit breaker maintenance, installation of lightning arrestor stations and animal guards.

Actual and Adjusted events for Dade City 13330 included four circuit outages as reported. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, installation of lightning arrestor stations and animal guards, replacement of overhead line sections, circuit breaker maintenance, upgrading of the fuse coordination and tree trimming.

Actual and Adjusted events for Turkey Ford 13679 included four circuit outages as reported. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, replacement of overhead line sections, circuit breaker maintenance and tree trimming.

Actual events for Buckhorn 13709 included four circuit outages, while only three were recorded in adjusted results. The company completed corrective activities on this circuit in 2008 including the patrolling of the line and tree trimming.

Actual events for Casey Road 13748 included four circuit outages, while only two were recorded in adjusted results. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, installation of lightning arrestor stations and animal guards, replacement of overhead line sections and tree trimming.

## **2008 Storm Implementation Plan and Annual Reliability Reports**

Actual and Adjusted events for Polk Power 14050 included four circuit outages as reported. The company completed corrective activities on this circuit in 2008 including the patrolling of the line, installation of automated reclosers, line fuses and fault indicators, replacement of overhead line sections, circuit breaker maintenance, upgrading of fuse coordination and tree trimming.

Other circuits identified in both “Actual” and “Adjusted” reports have had maintenance activities performed as noted on the Three Percent Feeder Report. The company will continue to monitor circuit outage performance as part of its daily and ongoing review of system reliability and will respond accordingly at a regional level.

### **H) Regional Reliability Indices**

#### **1) Summary**

Table 4 below represents customers by division over the period. Dade City, Plant City and South Hillsborough have the fewest customers and represent the most rural, lowest customer density per line mile in comparison to the other four Tampa Electric divisions. Actual reliability indices for the rural areas have varied from those of the more urban, densely populated areas for this period.

In 2008, SAIDI by division decreased in all divisions except for Dade City as represented in Table 5. 2008 SAIDI performance for all divisions but Western was below the five-year average and the Western division has maintained a somewhat flat performance compared against the five-year average.

Table 6 data represents improved CAIDI performance in comparison to 2007 for all divisions except for Central, Eastern, and South Hillsborough. In

## **2008 Storm Implementation Plan and Annual Reliability Reports**

addition, all divisions except for Plant City performed better than the five-year average.

SAIFI performance for Central, Eastern, Plant City, South Hillsborough, and Western as noted in Table 7, improved over 2007. All divisions except Western consistently performed better than the five-year average. In 2008 MAIFLe performance improved over 2007 in Dade City, Eastern, and Plant City. All divisions except Western had better MAIFLe performance than the five-year average as noted in Table 8.

For 2008, results for CEMI5, as noted in Table 9, indicate improved performance for all divisions except Winter Haven over 2007 results. However, Winter Haven performed better against the five-year average.

### **2) Improving Regional Reliability Trends**

Tampa Electric focuses on divisional reliability through its operational management structure, which includes a divisional Operations Manager and Engineer. Planned and corrective maintenance is engineered and coordinated to completion by divisional operations staff. The divisional management teams receive daily reports on outage activity, including date and time of outage, duration, cause, and customers affected, etc., and identify any discrepancies in the data. This daily outage reporting also affords the divisional staffs with key performance information and opportunities to identify and improve any trends that might have developed on feeders or laterals in their respective areas.

In 2008, Tampa Electric operating divisions established reliability indices goals which were reported and reviewed by management on a weekly basis. It is expected that feeder and lateral performance will continue to be tracked in support of improving regional reliability.



## 2008 Storm Implementation Plan and Annual Reliability Reports

**Table 4: Number of Customers by Service Area per Year**

	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Central	171,187	175,919	179,020	180,380	179,224
Dade City	13,000	13,421	13,818	13,778	13,806
Eastern	98,326	102,328	105,687	107,861	107,495
Plant City	50,032	51,633	53,081	53,612	53,925
South Hillsborough	49,271	53,627	57,675	59,315	59,540
Western	182,791	184,826	185,868	187,390	186,062
Winter Haven	63,013	64,981	67,362	67,775	67,243
System	627,620	646,735	662,511	670,111	667,295

**Table 5: SAIDI by Service Area per Year**

	<b>SAIDI</b>				
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Central	82.33	61.06	55.26	62.40	46.61
Dade City	174.41	147.94	208.68	127.03	127.30
Eastern	81.28	97.18	61.78	77.37	69.02
Plant City	105.29	130.41	96.05	127.97	108.01
South Hillsborough	88.55	126.74	95.83	73.55	65.41
Western	59.06	74.80	64.46	77.07	69.99
Winter Haven	70.58	65.13	58.00	65.67	51.66
System	78.43	83.90	69.16	76.80	65.55

## 2008 Storm Implementation Plan and Annual Reliability Reports

**Table 6: CAIDI by Service Area per Year**

	CAIDI				
	2004	2005	2006	2007	2008
Central	92.75	79.27	82.99	74.70	76.31
Dade City	81.33	98.35	74.94	73.04	63.62
Eastern	75.18	86.26	70.89	69.79	73.51
Plant City	63.98	77.08	76.94	82.86	78.91
South Hillsborough	64.57	91.78	83.55	65.93	73.04
Western	84.17	84.90	85.42	80.92	78.33
Winter Haven	67.92	64.57	58.01	71.98	53.01
System	78.17	82.11	77.68	75.30	73.28

**Table 7: SAIFI by Service Area per Year**

	SAIFI				
	2004	2005	2006	2007	2008
Central	0.89	0.77	0.67	0.84	0.61
Dade City	2.14	1.50	2.78	1.74	2.00
Eastern	1.08	1.13	0.87	1.11	0.94
Plant City	1.65	1.69	1.25	1.54	1.37
South Hillsborough	1.37	1.38	1.15	1.12	0.90
Western	0.70	0.88	0.75	0.95	0.89
Winter Haven	1.04	1.01	1.00	0.91	0.97
System	1.00	1.02	0.89	1.02	0.89

## 2008 Storm Implementation Plan and Annual Reliability Reports

**Table 8: MAIFle by Service Area per Year**

	MAIFle				
	2004	2005	2006	2007	2008
Central	16.17	11.23	10.56	11.69	12.36
Dade City	33.17	22.65	21.83	25.35	16.88
Eastern	20.50	15.47	12.57	15.84	15.33
Plant City	25.39	19.61	17.27	19.90	19.02
South Hillsborough	26.01	19.41	15.44	14.70	15.26
Western	15.01	11.41	12.63	12.07	12.59
Winter Haven	23.19	15.81	12.33	13.55	14.18
System	19.07	14.00	12.84	13.86	13.97

**Table 9: CEMI5 by Service Area per Year**

	CEMI5				
	2004	2005	2006	2007	2008
Central	1.17%	0.52%	0.35%	1.22%	0.29%
Dade City	15.84%	0.64%	37.90%	6.13%	5.12%
Eastern	3.57%	1.20%	0.66%	2.98%	0.23%
Plant City	14.45%	13.31%	11.05%	3.82%	3.84%
South Hillsborough	3.69%	8.52%	1.05%	2.45%	1.20%
Western	0.44%	0.57%	0.61%	1.97%	0.82%
Winter Haven	5.16%	0.49%	1.19%	0.31%	1.00%
System	3.30%	2.33%	2.26%	2.04%	0.97%

## 2008 Storm Implementation Plan and Annual Reliability Reports

### I) Overhead – Underground Reliability

#### 1) Five-Year Trends - Reliability Performance

Examining a five-year trend from 2004 to 2008 in overall outages presented in Table 10, 2004 represented the highest number of total outages during the period. Since that time, the company has seen an average annual reduction of 9.1 percent for total outages through 2008. Overhead outages represented the majority of outages ranging from 85 to 91 percent of the total outages for the period. Underground outages represented 9 to 15 percent annually compared against total outages.

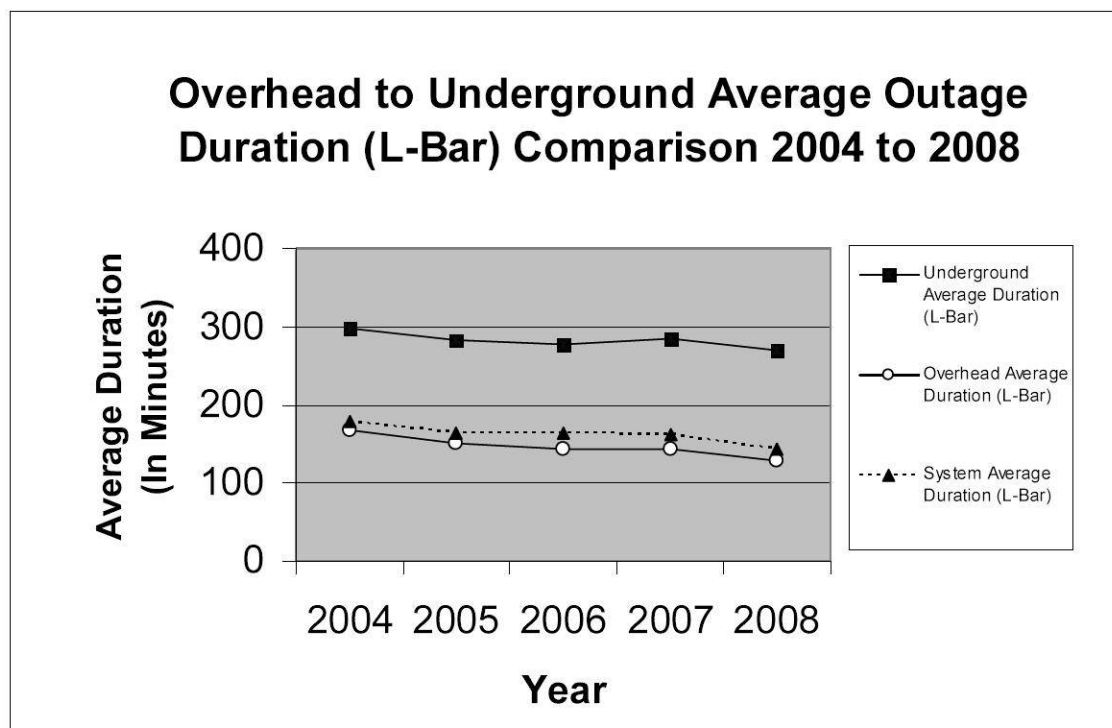
**Table 10: Outages per Year**

<b>System Totals</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Number of Outages Events (N)	11,188	10,871	9,475	9,997	10,098
Average Duration (L-Bar)	179.33	164.46	162.83	161.55	143.78
Average Restoration Time (CAIDI)	78.48	82.11	77.68	75.30	73.28
<b>Overhead</b>					
Number of Outages Events (N)	10,167	9,739	8,088	8,701	8,977
Average Duration (L-Bar)	167.44	150.68	143.3	143.28	128.01
Average Restoration Time (CAIDI)	75.93	78.25	72.85	71.7	69.41
<b>Underground</b>					
Number of Outages Events (N)	1,021	1,132	1,387	1,296	1,121
Average Duration (L-Bar)	297.75	283.03	276.76	284.24	270.07
Average Restoration Time (CAIDI)	246.09	279.82	244.73	253.33	266.54

## 2008 Storm Implementation Plan and Annual Reliability Reports

Tampa Electric miles of distribution through 2008 include 6,414 miles of overhead and 4,472 miles of underground for a total of 10,886 miles. The ratio of overhead and underground miles to total miles equates to 45 percent and 55 percent, respectively.

The overhead distribution system characteristically provides advantages for quicker troubleshooting, fault identification and shorter outage duration. Exhibit 9 below represents average outage duration (L-Bar) for the past five years. Overhead L-Bar decreased slightly in 2008 and has a five-year average of 146.52 minutes, while underground L-Bar has a five-year average of 282.37 minutes which also decreased in 2008. The five-year system L-Bar average is 162.39 minutes.



### **2) Tracking Overhead to Underground Reliability Performance**

Tampa Electric tracks outage records in its outage database according to cause and equipment type. These equipment types are designed and associated with the overhead and underground systems. Reporting capability allows the company to track CMI, CI, Number of Outages, Average Duration and CAIDI as referenced in Section C – Overhead to Underground in the Appendix. In addition, separate reporting was undertaken in order to align miles and customers for overhead and underground distribution.

The company tracks and reports MAIFle by system and circuit. Interruption data is electronically captured, recorded and tracked at each individual distribution circuit breaker. As a result, a momentary interruption that may occur down-line from the circuit breaker and is associated with overhead or underground equipment as noted above, is not currently captured and cannot be reported.

The company currently measures CEMI5 through a query that is run through its OMS. There is no option to run the query for overhead or underground systems. Therefore, the company is not able to provide CEMI5 as previously requested by Commission Staff.

### **3) Underground Distribution System Conversions**

As noted within the Coordination with Local Governments section of Tampa Electric's 2008 Storm Implementation Plan Report, the company has made proposals to local governmental agencies for the purpose of relocating overhead facilities to underground. Additionally, the company's Commercial/Industrial Customer Service New Construction Department works with the builder community and governmental agencies on new residential and commercial projects.

### J) Reliability-Related Customer Complaints

During 2008, Tampa Electric experienced a decrease of ten formal service-related complaints as logged by the Florida Division of Consumer Affairs and noted in Exhibit 10 below. In addition, service-related complaints as tracked by the company and including FPSC Formal, Three-Day, Transfer-Connect, eWarm Transfer and Executive Level decreased by ten complaints in 2008 as noted in Exhibit 11 below. In comparison to the last five-year average, overall complaints were 33 percent less in 2008. "All Service" complaints logged in 2004 included hurricane-related complaints received during the course of the company responding to three major hurricanes that impacted the area.

The company's Energy Delivery organization successfully worked through achieving satisfaction with 49 percent of FPSC Formal complaints received. This was accomplished by providing timely follow up to customers, identifying and resolving concerns through the resolution of the issue or development and completion of an acceptable action plan.

When comparing formal complaints logged against the company to reliability performance (Exhibits 12 and 13) over the last five years, it is apparent that as reliability performance has varied, complaints have tracked accordingly. The company believes that increased activity on vegetation management over the last four years, circuit patrol activity and resulting line improvements and other maintenance activities will continue to contribute toward minimizing service-related complaints in 2009.

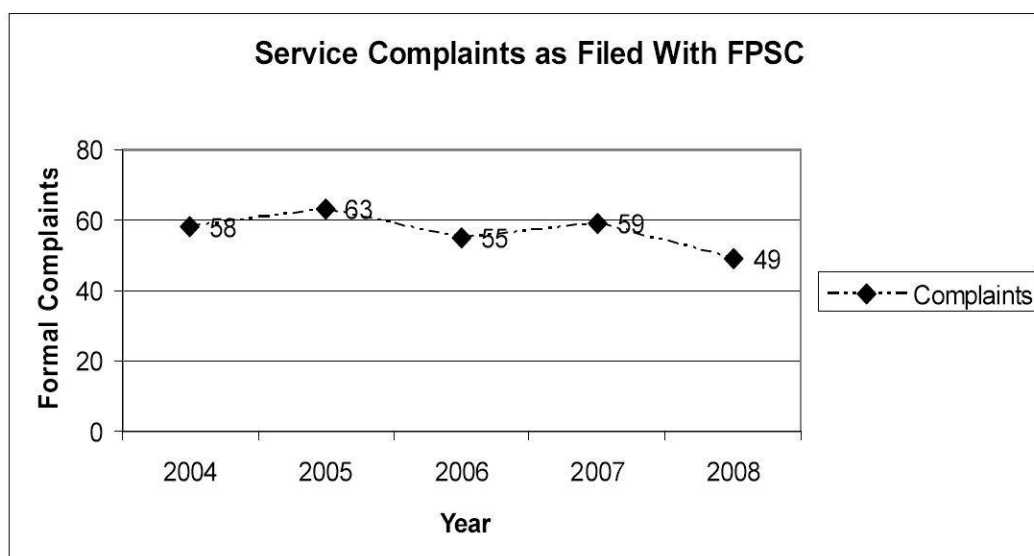
Tampa Electric's current process for responding to all service related complaints includes the central intake and coordination of complaint resolution through the System Reliability Department and extends out to Operations Engineers who are responsible for the daily oversight of feeders in

## 2008 Storm Implementation Plan and Annual Reliability Reports

their respective service area. Operations Engineers are involved in customer interactions, identifying needs and corrective measures, and taking responsibility for coordination through to completion. Working through and responding to complaints at a regional level affords the company an opportunity to be aware of any trends that may occur for a given feeder or lateral.

Circuit patrols that were completed over the last three years were selected on the basis of respective reliability indices, and with input and prioritization from the Operations Engineers and System Reliability. In addition, this group meets on a monthly basis to review common areas of concern across the system and identify opportunities for improvement.

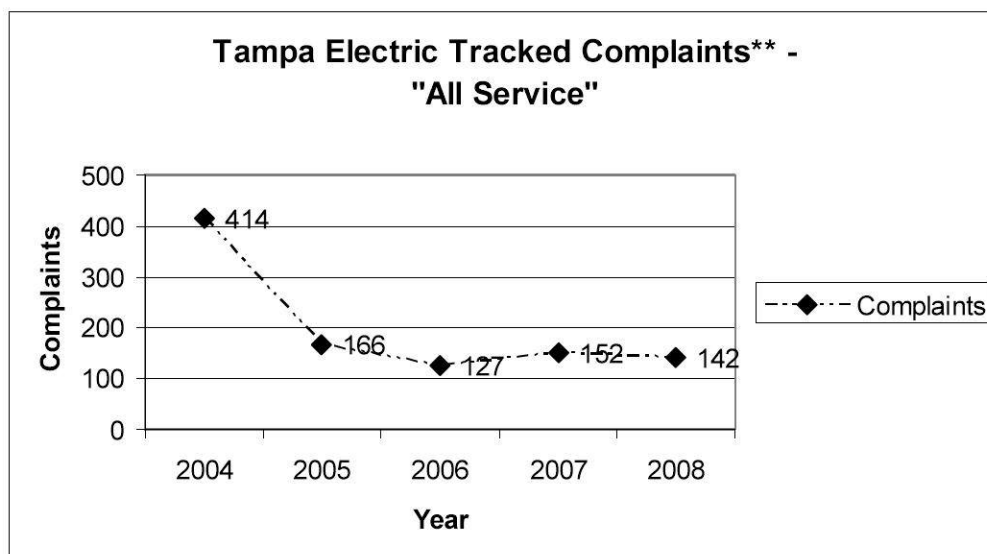
**Exhibit 10: Tampa Electric Service Formal Complaints Filed with the FPSC by Year**



Source: FPSC Consumer Activity Reports



Exhibit 11: Tampa Electric Service Complaints by Year



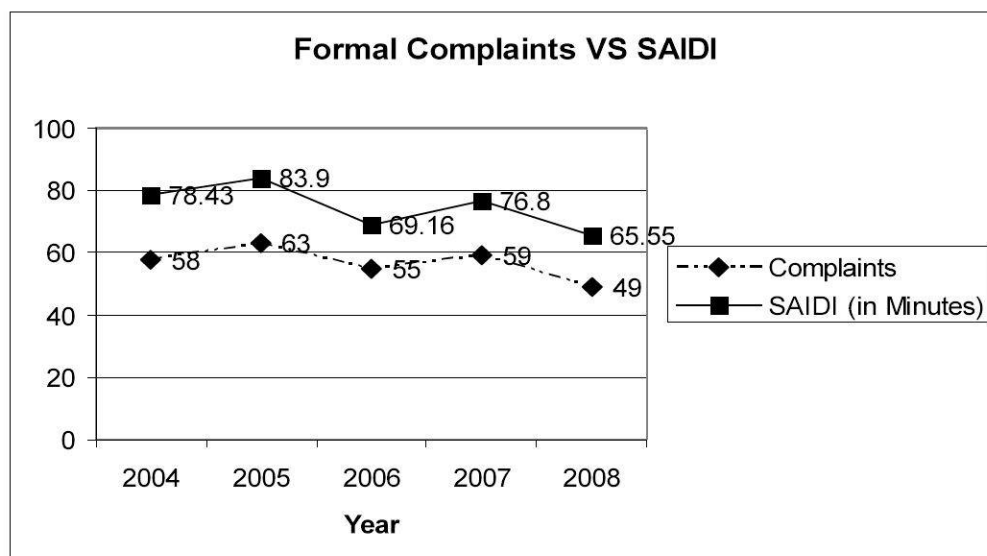
Source: Tampa Electric FPSC Tracking System Reports

Notes:

\* 2004 increase directly attributed to complaints related to the affects of Hurricane's Charley, Francis & Jeanne.

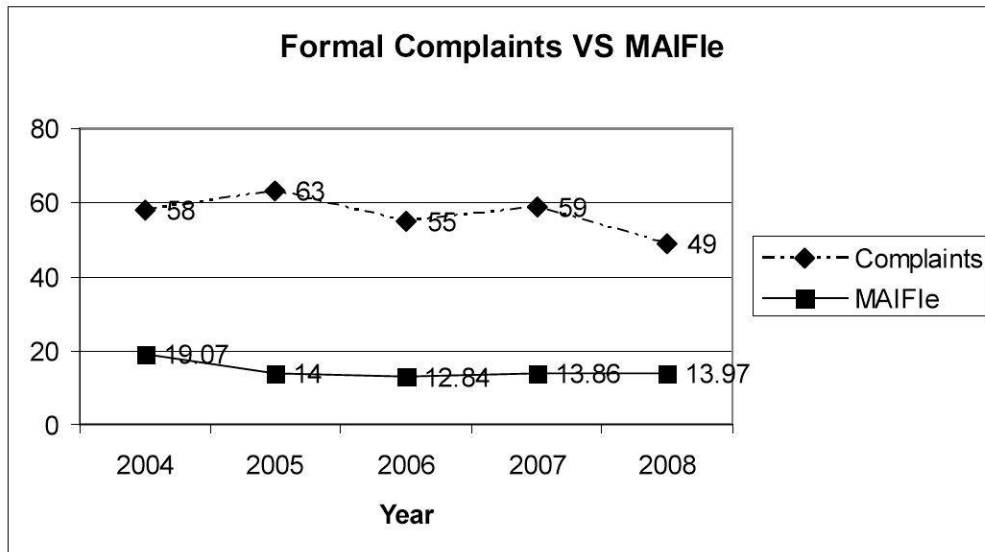
\*\* Consists of all "Service" complaints logged by the company including FPSC Formal, three-day, Transfer-Connect, eWarm Transfer and Executive Level.

Exhibit 12: Formal Complaints vs. SAIDI by Year



## 2008 Storm Implementation Plan and Annual Reliability Reports

Exhibit 13: Formal Complaints vs. MAIFle by Year





## **APPENDIX**

# **2008 STORM IMPLEMENTATION PLAN & ANNUAL RELIABILITY PERFORMANCE REPORTS**

## 2008 Storm Implementation Plan and Annual Reliability Reports

### A) Form 102 – Part I –Actual

#### PART I

##### Primary Causes of Outage Events - Actual

Utility Name: Tampa Electric

Year: 2008

Cause (a)	Number of Outages Events (N) (b)	Average Duration (L-Bar) (c)	Average Restoration Time (CAIDI) (d)
1. Vegetation	2,038	146.91	69.05
2. Lightning	1,570	189.48	129.44
3. Animals	2,250	78.63	59.90
4. Electrical	868	164.28	73.39
5. Bad Connection	787	180.28	134.77
6. Unknown	704	113.63	67.13
7. Other Weather	645	142.51	63.26
8. Defective Equipment	513	200.83	136.15
9. Vehicle	220	181.25	70.93
10. Down Wire	266	157.24	57.94
All Remaining Causes	332	129.11	34.21
System Totals	10,195	143.00	69.49

Form PSC/ECR 102-1, Docket No. 011351-EI, Rule 25-6.0455(a)

3 Percent Feeder List - Actual														
Utility Name: Tampa Electric			Year: 2008											
Primary Circuit Id. No. or Name (a)	Substation Origin (b)	Location (c)	Number of Customers					Outage Events "N" (i)	Avg. Duration "L-Bar" (j)	CAIDI (k)	Listed Last Year? (l)	Years in the Last 5 (m)	Action Completion Date (n)	
			Residential (d)	Commercial (e)	Industrial (f)	Other (g)	Total (h)							
CB 13007	Mulberry	Plant City	343	162	46		551	4	48.75	47.89	No	1	08/26/08	
CB 13063	Himes	Western	1,700	85	19		1,804	4	28.25	29.75	No	0	10/08/08	
CB 13230	Brandon	Eastern	744	249	26		1,019	4	31.50	31.48	No	0	10/13/08	
CB 13330	Dade City	Dade City	1,621	110	10		1,741	4	47.25	47.29	No	1	07/11/08	
CB 13389	Kirkland	Plant City	893	94	9		996	4	51.50	50.62	No	0	09/30/08	
CB 13414	Plant City	Plant City	723	125	14		862	4	55.50	53.54	No	0	10/20/08	
CB 13672	Meadow Park	Western	2,023	187	29		2,239	4	27.25	27.34	No	0	07/01/08	
CB 13679	Turkey Ford	Western	1,011	45	0		1,056	4	37.75	38.42	No	1	10/14/08	
CB 13709	Buckhorn	Eastern	774	29	4		807	4	27.00	26.99	No	1	12/19/08	
CB 13748	Casey Road	Western	950	112	18		1,080	4	32.25	37.73	No	1	07/21/08	
CB 13754	Granada	Western	1,271	98	13		1,382	4	25.75	24.32	No	0	09/17/08	
CB 13839	Florida Avenue	Central	892	168	16		1,076	4	38.00	38.39	No	0	10/23/08	
CB 13899	1st Street	South Hillsborough	146	72	6		224	4	44.00	47.59	No	0	12/29/08	
CB 13918	Lake Ruby	Winter Haven	643	43	0		686	4	12.25	12.25	No	0	08/29/08	
CB 14050	Polk Power	Plant City	394	58	6		458	4	68.25	68.18	Yes	2	12/31/08	
CB 13041	Bloomingdale	Eastern	1,006	28	1		1,035	3	50.00	50.88	No	0	09/23/08	
CB 13044	Fern Street	Central	1,534	134	14		1,682	3	50.00	50.04	No	0	07/23/08	
CB 13112	Manhattan	Western	1,092	119	16		1,227	3	32.67	31.58	No	1	09/14/08	
CB 13231	Brandon	Eastern	1,163	77	7		1,247	3	43.00	43.04	No	0	10/30/08	
CB 13299	Polk City	Winter Haven	994	76	5		1,075	3	27.67	19.30	No	0	08/28/08	
CB 13649	Rhodine Road	South Hillsborough	345	7	1		353	3	19.67	19.27	No	0	12/12/08	
CB 13832	Fowler Avenue	Central	364	45	3		412	3	30.67	30.65	No	0	10/21/08	
CB 14119	Fish Hawk	Eastern	1,564	42	12		1,618	3	61.00	61.77	No	0	12/31/08	

Form PSC/ECR 102-2, Docket No. 011351-EI, Rule 25-6.0455(b)

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Form 102 – Part III –Actual

### PART III

#### ANNUAL DISTRIBUTION RELIABILITY REPORT - 2008 – Actual

Utility Name: Tampa Electric

#### SAIDI: System Average Interruption Duration Index

<u>= Sum of All Customer Minutes Interrupted (CMI)</u>	<u>44,352,773</u>	66.47
Total number of Customers Served (C)	667,295	

#### CAIDI: System Average Interruption Duration Index

<u>= Sum of All Customer Minutes Interrupted (CMI)</u>	<u>44,352,773</u>	69.49
Total number of Customer Interruptions (CI)	638,217	

#### SAIFI: System Average Interruption Frequency Index

<u>= Total number of Customer Interruptions (CI)</u>	<u>638,217</u>	0.96
Total number of Customers Served (C)	667,295	

#### MAIFle: Momentary Average Interruption Event

<u>= Sum of All Customer Momentary Interruption Events (CME)</u>	<u>9,883,083</u>	14.81
Total number of Customers Served (C)	667,295	

#### LBar:

<u>= Minutes of Interruption</u>	<u>1,457,920</u>	143.00
Total number of Outages	10,195	

District	C	CMI	CI	CME	# Cust > 5
Central	179,224	8,485,741	119,295	2,321,294	527
Dade City	13,806	1,762,103	28,752	255,982	707
Eastern	107,495	7,543,317	107,659	1,751,582	247
Plant City	53,925	5,836,017	75,174	1,086,925	2,071
South Hillsborough	59,540	3,941,047	59,757	950,481	713
Western	186,062	13,287,567	181,262	2,517,107	1,534
Winter Haven	67,243	3,496,981	66,318	999,712	670
System Totals	667,295	44,352,773	638,217	9,883,083	6,469

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Form 102 – Part III continued – Actual

#### PART III

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#### Service Reliability Indices – Actual

Utility Name: Tampa Electric

Year: 2008

District or Service Area	SAIDI	CAIDI	SAIFI	MAIFle	CEMI5
(a)	(b)	(c)	(d)	(e)	(f)
Central	47.35	71.13	0.66562	12.95191	0.29%
Dade City	127.63	61.29	2.08257	18.54136	5.12%
Eastern	70.17	70.07	1.00153	16.29454	0.23%
Plant City	108.22	77.63	1.39405	20.15624	3.84%
South Hillsborough	66.19	65.95	1.00364	15.96374	1.20%
Western	71.41	73.31	0.97420	13.52832	0.82%
Winter Haven	52.01	52.73	0.98624	14.86715	1.00%
System	66.47	69.49	0.95642	14.81067	0.97%

Form PSC/ECR 102-3, Docket No. 011351-EI, Rule 25-6.0455(c)

## 2008 Storm Implementation Plan and Annual Reliability Reports

### B) Form 103 – Part I – Adjusted

#### PART I

##### Primary Causes of Outage Events – Adjusted

Utility Name: Tampa Electric

Year: 2008

Cause	Number of Outages Events (N)	Average Duration (L-Bar)	Average Restoration Time (CAIDI)
(a)	(b)	(c)	(d)
1. Vegetation	2,035	147.06	69.44
2. Lightning	1,570	189.48	129.44
3. Animals	2,252	78.63	59.90
4. Electrical	864	164.89	74.82
5. Unknown	703	113.48	67.13
6. Bad Connection	785	180.54	134.78
7. Other Weather	645	142.51	63.26
8. Defective Equipment	511	201.54	140.73
9. Vehicle	220	181.25	70.93
10. Down Wire	264	158.41	58.68
All Remaining Causes	249	150.82	46.50
System Totals	10,098	143.78	73.28

Form PSC/ECR 103-1, Docket No. 011351-EI, Rule 25-6.0455(a)



3 Percent Feeder List - Adjusted														Year: 2008
Utility Name: Tampa Electric														
Primary Circuit Id. No. or Name (a)	Substation Origin (b)	Location (c)	Number of Customers					Outage Events "N" (i)	Avg. Duration "L-Bar" (j)	CAIDI (k)	Listed Last Year? (l)	Years in the Last 5 (m)	Action Completion Date (n)	
			Residential (d)	Commercial (e)	Industrial (f)	Other (g)	Total (h)							
CB 13007	Mulberry	Plant City	343	162	46		551	4	48.75	47.89	No	1	08/26/08	
CB 13063	Himes	Western	1,700	85	19		1,804	4	28.25	29.75	No	0	10/08/08	
CB 13330	Dade City	Dade City	1,621	110	10		1,741	4	47.25	47.29	No	1	07/11/08	
CB 13389	Kirkland	Plant City	893	94	9		996	4	51.50	50.62	No	0	09/30/08	
CB 13414	Plant City	Plant City	723	125	14		862	4	55.50	53.54	No	0	10/20/08	
CB 13679	Turkey Ford	Western	1,011	45	0		1,056	4	37.75	38.42	No	1	10/14/08	
CB 13754	Granada	Western	1,271	98	13		1,382	4	25.75	24.32	No	0	09/17/08	
CB 13839	Florida Avenue	Central	892	168	16		1,076	4	38.00	38.39	No	0	10/23/08	
CB 13918	Lake Ruby	Winter Haven	643	43	0		686	4	12.25	12.25	No	0	08/29/08	
CB 14050	Polk Power	Plant City	394	58	6		458	4	68.25	68.18	Yes	2	12/31/08	
CB 13041	Bloomingtondale	Eastern	1,006	28	1		1,035	3	50.00	50.88	No	0	09/23/08	
CB 13044	Fern Street	Central	1,534	134	14		1,682	3	50.00	50.04	No	0	07/23/08	
CB 13112	Manhattan	Western	1,092	119	16		1,227	3	32.67	31.58	No	0	09/14/08	
CB 13230	Brandon	Eastern	744	249	26		1,019	3	37.67	37.68	No	0	10/13/08	
CB 13231	Brandon	Eastern	1,163	77	7		1,247	3	43.00	43.04	No	0	10/30/08	
CB 13299	Polk City	Winter Haven	994	76	5		1,075	3	27.67	19.30	No	0	08/28/08	
CB 13649	Rhodine Road	South Hillsborough	345	7	1		353	3	19.67	19.27	No	0	12/12/08	
CB 13707	Buckhorn	Eastern	1,074	54	9		1,137	3	34.33	34.30	No	0	12/17/08	
CB 13709	Buckhorn	Eastern	774	29	4		807	3	35.33	35.35	No	0	12/19/08	
CB 13832	Fowler Avenue	Central	364	45	3		412	3	30.67	30.65	No	0	10/21/08	
CB 13840	Florida Avenue	Central	1,835	124	11		1,970	3	57.00	56.99	No	0	08/29/08	
CB 13899	1st Street	South Hillsborough	146	72	6		224	3	55.67	55.57	No	0	12/29/08	
CB 14119	Fish Hawk	Eastern	1,564	42	12		1,618	3	61.00	61.77	No	0	12/31/08	

Form PSC/ECR 102-2, Docket No. 011351-EI, Rule 25-6.0455(b)

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Form 103 – Part III – Adjusted

### PART III

#### ANNUAL DISTRIBUTION RELIABILITY REPORT – 2008 – Adjusted

Utility Name: Tampa Electric

**SAIDI: System Average Interruption Duration Index**

= <u>Sum of All Customer Minutes Interrupted (CMI)</u>	<u>43,744,350</u>	65.55
Total number of Customers Served (C)	667,295	

**CAIDI: System Average Interruption Duration Index**

= <u>Sum of All Customer Minutes Interrupted (CMI)</u>	<u>43,744,350</u>	73.28
Total number of Customer Interruptions (CI)	596,935	

**SAIFI: System Average Interruption Frequency Index**

= <u>Total number of Customer Interruptions (CI)</u>	<u>596,935</u>	0.89
Total number of Customers Served (C)	667,295	

**MAIFI: Momentary Average Interruption Event**

= <u>Sum of All Customer Momentary Interruption Events (CME)</u>	<u>9,325,157</u>	13.97
Total number of Customers Served (C)	667,295	

**LBar:**

= <u>Minutes of Interruption</u>	<u>1,451,934</u>	143.78
Total number of Outages	10,098	

District	C	CMI	CI	CME	# Cust > 5
Central	179,224	8,353,612	109,474	2,214,659	527
Dade City	13,806	1,757,551	27,625	233,045	707
Eastern	107,495	7,419,030	100,932	1,647,968	247
Plant City	53,925	5,824,271	73,810	1,025,471	2,071
South Hillsborough	59,540	3,894,471	53,320	908,521	713
Western	186,062	13,021,821	166,246	2,341,995	1,534
Winter Haven	67,243	3,473,594	65,528	953,498	670
System Totals	667,295	43,744,350	596,935	9,325,157	6,469

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Form 103 – Part III continued – Adjusted

#### PART III

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#### Service Reliability Indices- Adjusted

Utility Name: Tampa Electric

Year: 2008

District or Service Area	SAIDI	CAIDI	SAIFI	MAIFLe	CEMI5
(a)	(b)	(c)	(d)	(e)	(f)
Central	46.61	76.31	0.61082	12.35693	0.29%
Dade City	127.30	63.62	2.00094	16.87998	5.12%
Eastern	69.02	73.51	0.93895	15.33065	0.23%
Plant City	108.01	78.91	1.36875	19.01662	3.84%
South Hillsborough	65.41	73.04	0.89553	15.25900	1.20%
Western	69.99	78.33	0.89350	12.58718	0.82%
Winter Haven	51.66	53.01	0.97450	14.17988	1.00%
System	65.55	73.28	0.89456	13.97456	0.97%

## **2008 Storm Implementation Plan and Annual Reliability Reports**

### **C) Pole Inspection Summary**

The following page contains the Annual Wood Pole Inspection Report.

ATTACHMENT 1

**TAMPA ELECTRIC COMPANY**  
**Annual Wood Pole Inspection Report**  
**2008**

ORDER NO. PSC - 07 - 0918 - PAA - PU  
 DOCKET NOS. 070634-EL, 070635-TL

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 (Anchors / Guys)	# of Poles Overloaded this Annual Inspection	Methods(s) <sup>1</sup>	# 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
Distribution and Transmission Poles				Distribution Reinforcement 2.1%	Distribution Reinforcement 810	Distribution Reinforcement 810						
Wood - 307,218												
Steel - 2,782				Distribution Replacement 5.5%	Distribution Replacement 2,111							
Concrete - 4,367												
Other Poles - 405												
<b>Distribution</b>												
299,510	38,205	38,202	2,921	7.6%	2,111	2,055	178	364 *	Visual Sound Bore Excavation	38,895	105,034	35.1%
<b>Transmission</b>												
26,490	3,412	3,873	261	6.8%	261	781	8	85		3,736	8,273	31.2%
<b>Totals</b>												
326,000	41,617	42,075	3,182		2,372	2,836	186	85		42,631	113,307	

**If b - c > 0, provide explanation**

**If d - g > 0, provide explanation**

2055 Poles Replaced from 2007 Distribution Inspection  
 781 Poles Replaced from backlog and 2007 Transmission Inspections

**Description of selection criteria for inspections**

\* 1 - IJUS is evaluating the 420 Comprehensive Load Analysis Poles from the 2008 Distribution Pole Inspection for Overload from the last quarter of 2008.

1) Of the 216 distribution poles that were given to IJUS in 2008 that were inspected by Osmose in the last quarter of 2007; 158 failed and 58 passed.

2) Of the 442 distribution poles that were given to IJUS in 2008 that were inspected by Osmose in the first quarter of 2008; 364 failed and 78 passed.

3) Of the 288 transmission poles that were given to IJUS in 2008 that were inspected by Osmose in the last quarter of 2007; 247 failed and 41 passed.

4) Of the 84 transmission poles that were given to IJUS in 2008 that were inspected by Osmose in the first quarter of 2008; 67 failed and 17 passed.

**<sup>1</sup> Methods:**

V = Visual  
 E = Excavation  
 P = Prod  
 S = Sound  
 B = Bore  
 R = Resistograph

## 2008 Storm Implementation Plan and Annual Reliability Reports

### D) Storm Hardening Metrics

#### 1) Initiative 1: Three-year Vegetation Management

2008 - System Vegetation Management Performance Metrics - SYSTEM							
	Feeders			Laterals			Total
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	
(A) Number of Outages	272	271	1	1,766	1,764	2	
(B) Customer interruptions	109,140	108,226	914	28,453	28,086	367	
(C) Miles Cleared		373.6			805.2		1178.9
(D) Remaining Miles		1386.1			3572.1		4958.1
(E) Outages / Mile							
[A ÷ (C + D)]							
(F) Vegetation CI / Mile							
[B ÷ (C + D)]							
(G) Number of Hotspot trims	7	791			1607		2398
(H) All Vegetation Management Costs	\$56,054	\$3,086,477			\$6,651,590		\$9,738,068
(I) Customer Minutes of Interruption	5,405,142	5,387,776	17,366	4,096,284	4,077,547	18,737	
(J) Outage restoration costs	\$105,491	\$105,474	\$17	\$1,046,532	\$1,046,434	\$98	
(K) Vegetation Budget (current year)							\$10,000,000
(L) Vegetation Goal (current year)		490.7			937.3		1428.0
(M) Vegetation Budget (next year)							\$16,073,444
(N) Vegetation Goal (next year)		488.8			1265.2		1754.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

#### Notes:

(H) All Vegetation Management Costs - SERVICE AREA - include ONLY contractor costs

(H) All Vegetation Management Costs - SYSTEM - include ALL costs

(L) & (N) Vegetation Goal shown in miles

(O) 8' - 10' Represent an average, however to comply with ANSI A300, actual trim distances will vary

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - CSA							
	Feeders			Laterals			Total
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	
(A) Number of Outages	67	67	0	457	456	1	
(B) Customer interruptions	28,302	28,302	0	6,739	6,734	5	
(C) Miles Cleared		82.8			112.9		195.7
(D) Remaining Miles		264.0			563.7		824.6
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		215			438		653
(H) All Vegetation Management Costs		\$676,631			\$923,129		\$1,599,760
(I) Customer Minutes of Interruption	1,398,301	1,398,301	0	1,063,738	1,063,463	275	
(J) Outage restoration costs	\$19,421	\$19,421	0	\$230,531	\$230,479	\$52	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		93.0			142.7		235.7
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		78.2			151.8		230.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - DCA							
	Feeders			Laterals			
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	Total
(A) Number of Outages	22	22	0	124	124	0	
(B) Customer interruptions	7,336	7,336	0	1,858	1,858	0	
(C) Miles Cleared		20.2			79.9		100.1
(D) Remaining Miles		55.2			203.1		258.3
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		16			33		49
(H) All Vegetation Management Costs		\$70,119			\$277,560		\$347,679
(I) Customer Minutes of Interruption	384,123	384,123	0	287,705	287,705	0	
(J) Outage restoration costs	\$18,366	\$18,366	\$0	\$90,039	\$90,039	\$0	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		27.4			88.4		115.8
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		20.6			77.4		98.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		



## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - WSA							
	Feeders			Laterals			
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	Total
(A) Number of Outages	77	76	1	470	469	1	
(B) Customer interruptions	37,882	36,968	914	8,940	8,939	1	
(C) Miles Cleared		55.4			106.8		162.1
(D) Remaining Miles		310.0			635.2		948.3
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		221			450		671
(H) All Vegetation Management Costs		\$716,369			\$1,380,803		\$2,097,172
(I) Customer Minutes of Interruption	1,731,487	1,714,121	17,366	1,188,379	1,169,917	18,462	
(J) Outage restoration costs	\$26,399	\$26,382	\$17	\$268,066	\$268,020	\$46	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		98.4			132.6		231.1
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		78.2			158.8		237.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - PCA							
	Feeders			Laterals			Total
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	
(A) Number of Outages	33	33	0	239	239	0	
(B) Customer interruptions	7,992	7,992	0	2,445	2,445	0	
(C) Miles Cleared		52.7			194.9		247.6
(D) Remaining Miles		203.5			749.7		953.2
(E) Outages per Mile $[A \div (C + D)]$							
(F) Vegetation CI per Mile $[B \div (C + D)]$							
(G) Number of Hotspot trims		89			182		271
(H) All Vegetation Management Costs		\$352,819			\$1,304,136		\$1,656,955
(I) Customer Minutes of Interruption	414,578	414,578	0	443,865	443,865	0	
(J) Outage restoration costs	\$12,006	\$12,006	\$0	\$146,314	\$146,314	\$0	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		48.4			174.9		223.3
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		82.5			310.5		393.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - WHA							
	Feeders			Laterals			
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	Total
(A) Number of Outages	13	13	0	55	55	0	
(B) Customer interruptions	6,028	6,028	0	813	813	0	
(C) Miles Cleared		52.3			130.9		183.3
(D) Remaining Miles		195.6			512.1		707.5
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		51			105		156
(H) All Vegetation Management Costs		\$222,457			\$556,579		\$779,036
(I) Customer Minutes of Interruption	227,789	227,789	0	131,280	131,280	0	
(J) Outage restoration costs	\$3,617	\$3,617	\$0	\$43,232	\$43,232	\$0	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		60.7			126.4		187.0
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		101.4			260.6		362.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - SHA							
	Feeders			Laterals			
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	Total
(A) Number of Outages	12	12	0	96	96	0	
(B) Customer interruptions	1,951	1,951	0	1,519	1,519	0	
(C) Miles Cleared		39.1			61.8		100.8
(D) Remaining Miles		151.2			481.6		632.8
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		58			119		177
(H) All Vegetation Management Costs		\$304,637			\$481,665		\$786,302
(I) Customer Minutes of Interruption	155,948	155,948	0	213,619	213,619	0	
(J) Outage restoration costs	\$4,457	\$4,457	\$0	\$41,819	\$41,819	\$0	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		83.8			145.2		229.1
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		63.7			181.3		245.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

2008 - System Vegetation Management Performance Metrics - ESA							
	Feeders			Laterals			
	Unadjusted	Adjusted	Diff.	Unadjusted	Adjusted	Diff.	Total
(A) Number of Outages	48	48	0	325	325	0	
(B) Customer interruptions	19,649	19,649	0	5,778	5,778	0	
(C) Miles Cleared		71.2			118.0		189.2
(D) Remaining Miles		206.7			426.7		633.4
(E) Outages per Mile [A ÷ (C + D)]							
(F) Vegetation CI per Mile [B ÷ (C + D)]							
(G) Number of Hotspot trims		139			282		421
(H) All Vegetation Management Costs		\$672,345			\$1,115,127		\$1,787,472
(I) Customer Minutes of Interruption	1,092,916	1,092,916	0	767,698	767,698	0	
(J) Outage restoration costs	\$21,225	\$21,225	\$0	\$226,532	\$226,532	\$0	
(K) Vegetation Budget (current year)							
(L) Vegetation Goal (current year)		79.0			127.1		206.1
(M) Vegetation Budget (next year)							
(N) Vegetation Goal (next year)		64.3			124.7		189.0
(O) Trim-Back Distance		8 - 10'			8 - 10'		

## 2008 Storm Implementation Plan and Annual Reliability Reports

### 2) Initiative 2: Joint-Use Pole Attachments Audit

Describe the extent of the audit and results pertaining to pole reliability and NESC safety matters. The intent is to assure the Commission that utilities know the status of their facilities and that reasonable efforts are taken to address pole reliability and NESC safety matters.

- a) Percent of system audited. 75% feeders :\_N/A\_\_\_ laterals :\_N/A\_\_\_
- b) Date audit conducted? January through December 2008
- c) Date of previous audit? Total system-wide audit completed 2001.
- d) List of audits conducted annually. Through Tampa Electric's Pole Attachment Application process the company performed the following audits: attachment verification, NESC violation analysis, pole loading assessment.

Joint-Use Attachment Audits – Distribution Poles

(A) Number of company owned distribution poles.	313,506
(B) Number of company distribution poles leased.	13,102
(C) Number of owned distribution pole attachments	212,492
(D) Number of leased distribution pole attachments.	13,102
(E) Number of authorized attachments.	324,241
(F) Number of unauthorized attachments.	35,315
(G) Number of distribution poles strength tested.	43,053
(H) Number of distribution poles passing strength test.	38,917
(I) Number of distribution poles failing strength test (overloaded).	1,873
(J) Number of distribution poles failing strength test (other reasons).	2,111
(K) Number of distribution poles corrected (strength failure).	178
(L) Number of distribution poles corrected (other reasons).	883
(M) Number of distribution poles replaced.	3,451
(N) Number of apparent NESC violations involving electric infrastructure.	37
(O) Number of apparent NESC violations involving 3 <sup>rd</sup> party facilities.	906

State whether pole rents are jurisdictional or non-jurisdictional. If pole rents are jurisdictional, then provide an estimate of lost revenue and describe the

## **2008 Storm Implementation Plan and Annual Reliability Reports**

company's efforts to minimize the lost revenue. Tampa Electric does not have any non-jurisdictional distribution poles. Tampa Electric performed an audit of 75 percent of its system in 2008.

- (B) These are the number of poles where Tampa Electric leases space on foreign owned poles.
- (D) Each attachment is counted as one per pole on leased poles.
- (J) These 2,111 poles were identified for replacement during Tampa Electric's Pole Inspection Program and failed the strength test due to wood damage at ground-line or other locations on the pole.
- (K) These poles were re-guyed or re-configured to pass strength loading.
- (L) The company reinforced these poles with trusses.

## 2008 Storm Implementation Plan and Annual Reliability Reports

### 3) Initiative 3: Six-Year Inspection Cycle for Transmission Structures

#### Transmission Circuit, Substation and Other Equipment Inspections

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total transmission circuits.		175				\$545,900
(B1) Planned transmission circuit inspections – Groundline (Structures)	18 (3,412)		\$127,153		12 (2,845)	
(B2) Planned transmission circuit inspections – Above Ground (Structures).	19 (3,784)		\$233,000		13 (3,879)	
(C1) Completed transmission circuit inspections – Groundline (Structures)		23 (3,636)		\$106,914		
(C2) Completed transmission circuit inspections – Above Ground (Structures)		24 (3,874)		\$176,705		
(D1) Percent of transmission circuit inspections completed - Groundline		100%				
(D2) Percent of transmission circuit inspections completed – Above Ground.		102%				
(E) Planned transmission substation inspections.	65		\$77,168		65	
(F) Completed transmission substation inspections		65		\$115,958		
(G) Percent transmission substation inspections completed.		100%				
(H) Planned transmission equipment inspections (other equipment). – Ground Patrol/ IR Patrol		175/175	\$80,499		175/175	
(I) Completed transmission equipment inspections (other equipment) – Ground Patrol/ IR Patrol		100/175		\$101,261		
(J) Percent of transmission equipment inspections completed (other equipment) – Ground Patrol/ IR Patrol		57%/100%				

Note 1: The number of structures inspected is in parentheses.

Note 2: The Groundline and Above Ground Inspection quantities include multiple pole structures.

Note 3: Ground Patrol and IR Patrol were planned for all transmission circuits. The IR Patrol was completed as planned. The Ground Patrol was performed on all 138 kV and 230 kV circuits, all critical 69 kV circuits and 34 percent of the non-critical 69 kV circuits. This equates to 57 percent of the total circuits.



## 2008 Storm Implementation Plan and Annual Reliability Reports

### Transmission Tower Structure Inspections

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total transmission tower structures		214				
(B) Planned transmission tower structure inspections – Above Ground	0		\$0		94	\$4,935
(C) Completed transmission tower structure inspections		0		\$0		
(D) Percent of transmission tower structure inspections completed		N/A				

Note: The number of tower structures includes steel lattice towers only.

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Transmission Pole Inspections

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of transmission poles		26,000				
(B) Number of transmission poles strength tested – Note 2	949	256	Note 1	Note 1	808	Note 1
(C) Number of transmission poles passing strength test		189				
(D) Number of transmission poles failing strength test (overloaded)		67				
(E) Number of transmission poles failing strength test (other reasons)		245				
(F) Number of transmission poles corrected (strength failure)		0				
(G) Number of transmission poles corrected (other reasons)		15				
(H) Total transmission poles replaced (Structures)		260			312	Note 3

Note 1: The transmission pole strength test is budgeted as part of the groundline inspection. This information is included in the Transmission Circuit, Substation and Other Equipment Inspections section.

Note 2: The company estimated 949 poles that potentially needed strength testing; however, by year end 256 poles were found with attachments that required strength testing. The company completed a strength test on 100 percent of those poles.

Note 3: The budget information for this table is included in the information supplied in the Hardening of Existing Transmission Structures section.

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### 3) Initiative 4: Storm Hardening Activities for Transmission Structures

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Transmission structures scheduled for hardening.	660		\$10,852,250		683	\$10,715,313
(B) Transmission structures hardening completed.		789		\$12,256,574		
(C) Percent transmission structures hardening completed.		119%				

Tampa Electric is hardening the existing transmission system in a prudent, cost-effective manner utilizing its inspection and maintenance program. This plan includes the systematic replacement of wood transmission structures with non-wood structures during the company's annual maintenance of the transmission system. Additionally, the company will utilize non-wood structures for all new transmission line construction projects as well as system rebuilds and line relocations.

In the early 1990s, Tampa Electric made the decision to begin building all new transmission circuits with non-wood structures. This was based on a life-cycle cost analysis for new construction. Tampa Electric also decided to modify its transmission maintenance practices to a program of non-wood replacements for all transmission pole replacements.

Tampa Electric does not reinforce wood transmission structures as is allowed by the NESC; if a transmission structure requires reinforcement or replacement due to its condition, Tampa Electric changes out the pole to a non-wood structure. In most cases, this new pole provides strength in excess

## **2008 Storm Implementation Plan and Annual Reliability Reports**

of the original strength of the wood transmission pole.

The criteria used to select poles for upgrades and replacement is straightforward. First, all new transmission circuits are constructed with steel or concrete poles. Over time, this new construction will result in a higher percentage of structures being non-wood across the Tampa Electric system. Second, whenever a transmission line is relocated due to a road widening or customer-driven relocation, the new poles installed are non-wood. Third, all poles replaced due to deterioration are replaced and maintained with non-wood structures.

Tampa Electric strongly believes that the replacement of sound wood transmission structures is not a cost-effective use of resources. The company estimates that it would cost in excess of \$250 million to replace all its wood transmission structures. Wood structures that are in good condition and can meet NESC extreme wind requirements will not be replaced. The company believes that its approach to hardening the transmission system is an appropriate cost-effective program that provides a good balance of system hardening and prudent spending.

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### 5) Initiative 5: Geographic Information System

#### Distribution OH Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide OH assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of OH assets currently on system.	1,290,983	1,290,983	N/A	N/A	N/A	N/A
(C) Percent of OH assets already on system.	100%	100%	\$379,250	\$837,731	100%	\$648,751
(D) Annual OH assets targeted for input (goal).	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual OH assets input to system (actual).	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of OH assets input.	100%	100%	\$379,250	\$837,731	100%	\$648,751

#### Distribution UG Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide UG assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of UG assets currently on system.	1,079,8	1,079,843	N/A	N/A	N/A	N/A
(C) Percent of UG assets already on system.	100%	100%	\$379,250	\$837,731	100%	\$648,751
(D) Annual UG assets targeted for input (goal).	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual UG assets input to system (actual).	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of UG assets input.	100%	100%	\$379,250	\$837,731	100%	\$648,751

## 2008 Storm Implementation Plan and Annual Reliability Reports

### Transmission OH Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide OH transmission assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of OH transmission assets currently on system.	69,444	69,444	N/A	N/A	N/A	N/A
(C) Percent of OH transmission assets already on system.	100%	100%	\$379,250	\$837,731	100%	\$648,751
(D) Annual OH transmission assets targeted for input.	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual OH transmission assets input to system.	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of OH transmission assets input.	100%	100%	\$379,250	\$837,731	100%	\$648,751

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### Transmission UG Data Input

	Activity		Current Budget		Next Year	
	Goal	Actual	Budget	Actual	Goal	Budget
(A) Total number of system wide UG transmission assets for input.	N/A	N/A	N/A	N/A	N/A	N/A
(B) Number of UG transmission assets currently on system.	37	37	N/A	N/A	N/A	N/A
(C) Percent of UG transmission assets already on system.	100%	100%	\$379,250	\$837,751	100%	\$648,751
(D) Annual UG transmission assets targeted for input.	N/A	N/A	N/A	N/A	N/A	N/A
(E) Annual UG transmission assets input to system.	N/A	N/A	N/A	N/A	N/A	N/A
(F) Annual percent of UG transmission assets input.	100%	100%	\$379,250	\$837,751	100%	\$648,751

All "Activity" and "Current Budget" Data is 2008 Tampa Electric GIS Project activities and budgeted dollars. All "Next Year" Data is 2009 Tampa Electric GIS Project activities, budgeted and unbudgeted dollars. Asset counts are current feature instance counts out of GIS. Feature instance counts includes all poles, spans of conductor, transformers, capacitors, switches, breakers, etc. Current year budget and actual expenses included final delivery of migrated data and auditing and data correction activities related to extracting data to OMS, The expenditures were not tracked according to Transmission or Distribution, or OH or UG, thus were divided up uniformly. In 2009, all system data will be entered and maintained in GIS and listed expenses are associated with data quality control and quality assurance activities as well as remaining payments to the software vendor.

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### **6) Initiative 6: Post-Storm Data Collection**

See Section I – Storm Preparedness Plans, item F) Initiative 6: Post-Storm Data Collection on pages 27 through 33 for a detail discussion.

### **7) Initiative 7: Outage Data - Overhead and Underground Systems**

Tampa Electric experienced no extreme weather events in 2008.

### **8) Initiative 8: Increase Coordination with Local Governments**

See attached pages 145 through 147 for a matrix of Tampa Electric's activities involving its coordination with local governments.



# 2008 Storm Implementation Plan and Annual Reliability Reports

Gov't Entities	Communication Efforts Presentations, Material, Etc.	Storm Workshop and Training With Local Gov't Officials and Fire and Police Personnel	Emergency Operation Centers Key Personnel Contact	Search and Rescue Teams Assistance to Local Gov't	Damaged Facilities Reporting Local Gov't Involvement and Training	Vegetation Management Tree Ordinances, Planting Guides, and Trim Procedures	Undergrounding Share Information, Estimates, and Materials
Hillsborough County	Forwarded Tampa Electric's annual hurricane season media release to County Commission and staff, outlining emergency service contact numbers and safety guidelines. <b>1 Man-hour.</b>	<b>Tampa Port Authority and USCG</b> (4/4 and 4/21) - Storm Preparedness Planning <b>7 hrs.</b> (4/25) - Presentation to gov. emergency managers in preparation for USCG exercise <b>6 hrs.</b> (3/15) seminar participation (3/19) Port Restoration exercise - participation <b>6 hrs</b> (Total <b>19 man hours</b> )	(6/11) HCEOC Storm Exercise participation <b>4 man-hours</b>	Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.		Worked with the Hillsborough County Planning & Growth Management Division on related tree and planting issues under Right-of-Ways. <b>4.0 man-hours.</b>	
	3/29 Office of Neighborhood Relations Conference - manning line clearance booth - <b>12 man-hours</b>	<b>Critical Facility Index (CFI) Planning in conjunction with HCEOC</b> (January) <b>7 man-hours</b>	Quarterly Disaster Committee Meeting (3/8) <b>10hrs</b>			Current Board Member of the Hillsborough County Tree & Landscape Committee. Attended multiple meetings as board member. <b>16 man-hours.</b>	
	5/4 Hazard Mitigation Meeting w/County Planning and Growth Mgmt - <b>2 man-hours</b>	<b>Citizen Corp</b> (April, June, Aug) Participant in the Citizen Corp Council for Hillsborough County. <b>7.5 man-hours</b>	8/18 EOC Activation meeting <b>1 man-hour</b>			Developed radio presentation with the University of South Florida related to hurricane hardening and protection. <b>6.0 man-hours.</b>	
	5/29 HC & ESRI meeting on Disaster Plan <b>2 man-hours</b>	<b>Local Mitigation Strategy Group</b> (3/26 and 6/25) Group participant and leading the Business LMS Group. <b>5 man-hours</b>					
	6/19 Local Mitigation Strategy meeting w/Long Range Post-Disaster Redevelopment Plan <b>2 man-hours</b>	<b>Post Disaster Redevelopment Plan (PDRP) Project</b> (Began in May 2008) (40hrs+ to date) Chair of the Hillsborough County PDRP Infrastructure Repair Technical Advisory Committee which includes public and private infrastructure and facilities.					
	6/25 Local Mitigation Strategy meeting w/Long Range Post-Disaster Redevelopment Plan <b>2 man-hours</b>	<b>Meeting with FDOT and HCEOC to discuss Debris Management Plan</b> ( 7/9) <b>2 man-hours</b>					
	7/30 Kickoff for Long Range Post-Disaster Redevelopment Plan <b>2 man-hours</b>	Meeting with HCEOC and Tampa Bay Water discuss CFI for their facilities. ( 5/13) <b>2 man-hours</b>					
City of Tampa	August 29, Corp Comm news conference to announce Port Storm Hardening Pilot Project. <b>8 man-hours</b>			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.		Developed and produced the City of Tampa Television "Your City, Your Station" video related to Storm Hardening and "Right Tree - Right Place" Spotlighting Tampa Tree Trimming. <b>8.0 man-hours.</b>	Provided the City of Tampa with a quote for undergrounding distribution line along 22 St. <b>16 man-hours</b>
	10/08 Sent community letters regarding St. Joseph Storm Hardening Pilot Project and posted info on TE Projects Webpage. <b>8 man-hours</b>					Participated in the City of Tampa Steering Committee on Urban Forestry Sustainability. <b>10 man-hours.</b>	
Plant City	Forwarded Tampa Electric's annual hurricane season media release to Plant City Commission and staff, outlining emergency service contact numbers and safety guidelines. <b>1 Man-hour.</b>	Communicated to governmental officials updates on TLSA process <b>1 man-hour</b>	8/19 Participated in Plant City EOC pre-activation for TS Fay <b>1 man hours</b>	Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	August 18th, Attended Plant City EOC Pre-storm meeting in preparation for Tropical Storm Fay. <b>1 man -hour</b>						
Temple Terrace	September 25, toured Temple Terrace EOC - <b>4 man-hours</b>			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			Provided the City of Temple Terrace with a quote for undergrounding distribution line along 56th St. <b>14 man-hours</b>
Grass root	Community Relations held a community open house in South Tampa to explain a hardening project - converting (6) 4kV circuits into a single 13kV. <b>Total Man-hours 60</b>						

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Gov't Entities	Communication Efforts Presentations, Material, Etc.	Storm Workshop and Training With Local Gov't Officials and Fire and Police Personnel	Emergency Operation Centers Key Personnel Contact	Search and Rescue Teams Assistance to Local Gov't	Damaged Facilities Reporting Local Gov't Involvement and Training	Vegetation Management Tree Ordinances, Planting Guides, and Trim Procedures	Undergrounding Share Information, Estimates, and Materials
Polk County	Met with Polk County ECC staff to discuss priority circuits, and how they are prioritized. <b>Total Man-hours 6</b>		8/19 Participated in Polk EOC activation for TS Fay <b>2 man hours</b>	Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	Met with Polk Co to help organize a Post-Disaster Plan. <b>6 man hours</b>						
	Participated in Polk County's Hurricane Expo. Over 2000 customers in attendance. <b>6 man hours</b>						
	Auburndale Communicated Tampa Electric's commitment to storm season preparedness to City Manager Total Man Hours 1			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	Eagle Lake Communicated Tampa Electric's commitment to storm season preparedness to City Manager Total Man Hours 1			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	Lake Alfred Communicated Tampa Electric's commitment to storm season preparedness to City Manager Total Man Hours 1			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	9/17 Lake Alfred Chamber of Commerce Business Expo - provided Emergency Prep Guides and other materials. <b>4 man-hours</b>						
	Mulberry Forwarded Tampa Electric's annual hurricane season media release to Mulberry's City Manager, outlining emergency service contact numbers and safety guidelines. <b>1 Man-hour.</b>			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
Polk City	Communicated Tampa Electric's commitment to storm season preparedness to City Manager Total Man Hours 1			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
Winter Haven	Communicated Tampa Electric's commitment to storm season preparedness to City Manager Total Man Hours 1			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
Pasco County	Pasco County Joint EM Planning Session - Participated in a joint meeting with the Eastern Pasco County municipalities and our 4 assigned EOC reps. <b>6 man-hours total.</b>						
	Tampa Electric Reps from EM, Community Relations and Operations met with Pasco EOC to follow up on previous meeting 10 man-hours						
	Dade City Pasco County Joint EM Planning Session - Participated in a joint meeting with the Eastern Pasco County municipalities and our 4 assigned EOC reps.			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	San Antonio Pasco County Joint EM Planning Session - Participated in a joint meeting with the Eastern Pasco County municipalities and our 4 assigned EOC reps.			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			
	St. Leo Pasco County Joint EM Planning Session - Participated in a joint meeting with the Eastern Pasco County municipalities and our 4 assigned EOC reps.			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.			

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Gov't Entities	Communication Efforts Presentations, Material, Etc.	Storm Workshop and Training With Local Gov't Officials and Fire and Police Personnel	Emergency Operation Centers Key Personnel Contact	Search and Rescue Teams Assistance to Local Gov't	Damaged Facilities Reporting Local Gov't Involvement and Training	Vegetation Management Tree Ordinances, Planting Guides, and Trim Procedures	Undergrounding Share Information, Estimates, and Materials
Pinellas County			(3/10 and 3/25) CFI meeting with Pinellas County EOC <b>2 man-hours</b>				
	<p><b>Oldsmar</b> June 20, participated in an Oldsmar EOC storm season orientation meeting at the EOC. <b>6 man-hours</b></p> <p>Coordinated status meetings to Tampa Electric Engineering and City contacts. 5 man-hours</p> <p>August 19, personnel on hand for EOC activation during Tropical Storm Fay. <b>4 man-hours</b></p>			Tampa Electric's Energy Delivery maintains a staff of lineman and vehicles ready to assist local Fire Departments with Search and Rescue Activities.		Began converting approx. 3 blocks of OH fed Distribution line to UG at the request of the city to accommodate their street scaping project.	
Other	<p><b>Statewide</b> May 30th, released to the media Tampa Electric's annual hurricane season release outlining emergency service contact numbers and safety guidelines. <b>4 man-hours total</b></p> <p>Forwarded Tampa Electric's annual hurricane season media release to State Sen. Storms and Trivessa and staff, outlining emergency service contact numbers and safety guidelines. <b>1 Man-hour.</b></p>						
	<b>Regional</b>		Tampa Bay Regional Planning Council Meeting regarding evacuation studies <b>3 man-hours</b>				
			Tampa Bay Regional Planning Council From January to July 2008 Tampa Electric EM participated and was a key contributor to the Business Continuity Kit project. <a href="http://www.fdisasterkit.org">www.fdisasterkit.org</a> 18 man-hours				
	<b>Federal</b>		Edison Electric Institute Business Continuity Workgroup (40hrs+) Workgroup participant and presenter at conference and developed and facilitated exercise. DOH and FEMA representation at exercise.			TEC has applied for the Tree Line USA designation in November 2008 and awaiting certification and accreditation. 120 hours.	

**9) Initiative 9: Collaborative Research**

See Section I – Storm Preparedness Plans, item I) Initiative 9: Collaborative Research on pages 38 through 57 for detail discussion and related data.

**10) Initiative 10: Disaster Preparedness and Recovery Plan**

The company's Disaster Preparedness and Recovery Plan did not change from what was reported in 2007. It will be reviewed in 2009 and updated accordingly.

**11) Feeder Specific and Attached Laterals Data**

See attached pages 149 through 184.

(A) Circuit	(B) District	(C) Number of OH Lateral Lines	(D) Number of OH Lateral Miles	(E) Number of Customers Served on OH Lateral Lines	(F) CMI for OH Lateral Lines	(G) CI for OH Lateral Lines	(H) Number of URD Lateral Lines	(I) Number of URD Lateral Miles	(J) Number of Customers Served on URD Lateral Lines	(K) CMI for URD Lateral Lines	(L) CI for URD Lateral Lines	(M) Number of Automatic Line Sectionalizing Devices on the Lateral
13001	SOUTH HILLSBOROUGH	N/A	13.24	814	118000	199	N/A	8.46	436	0	0	0
13002	SOUTH HILLSBOROUGH	N/A	5.63	347	1250	11	N/A	10.06	496	0	0	0
13003	SOUTH HILLSBOROUGH	N/A	31.48	639	84426	433	N/A	7.01	252	161	1	0
13004	DADE CITY	N/A	10.53	553	19445	180	N/A	12.94	279	2980	10	0
13005	DADE CITY	N/A	5.00	285	3190	22	N/A	2.10	205	1926	6	0
13006	DADE CITY	N/A	39.89	1103	102118	677	N/A	28.92	1009	13334	41	0
13007	PLANT CITY	N/A	24.65	508	41267	204	N/A	2.51	52	472	1	2
13008	PLANT CITY	N/A	9.02	363	3778	48	N/A	1.26	14	94	1	0
13009	PLANT CITY	N/A	3.06	89	1986	12	N/A	0.60	38	0	0	0
13010	PLANT CITY	N/A	6.81	507	42601	486	N/A	21.13	1018	1890	16	0
13011	PLANT CITY	N/A	23.35	1115	175727	1041	N/A	2.52	54	175	2	0
13012	WESTERN	N/A	0.50	103	3392	28	N/A	0.33	14	0	0	0
13013	WESTERN	N/A	0.23	34	0	0	N/A	1.07	180	0	0	0
13016	WESTERN	N/A	0.72	85	245	7	N/A	0.46	94	0	0	0
13017	SOUTH HILLSBOROUGH	N/A	11.45	9	25473	144	N/A	29.76	375	1274	7	0
13019	SOUTH HILLSBOROUGH	N/A	16.06	972	48627	339	N/A	5.55	235	1025	3	0
13020	SOUTH HILLSBOROUGH	N/A	13.46	1212	38782	278	N/A	3.36	629	0	0	0
13021	CENTRAL	N/A	4.53	269	23496	231	N/A	6.38	1005	12854	55	0
13022	CENTRAL	N/A	3.39	424	15763	88	N/A	0.86	184	214	1	0
13023	CENTRAL	N/A	9.31	916	13909	142	N/A	2.98	352	354	3	0
13024	CENTRAL	N/A	9.23	765	29680	247	N/A	1.98	171	1512	4	0
13026	CENTRAL	N/A	3.16	281	21110	170	N/A	6.23	1462	9827	62	0
13027	CENTRAL	N/A	9.60	671	31993	275	N/A	2.43	351	432	2	0
13028	CENTRAL	N/A	17.79	542	18977	133	N/A	6.07	1350	28854	67	0
13029	CENTRAL	N/A	5.28	507	31807	271	N/A	4.29	644	261	1	0
13030	WINTER HAVEN	N/A	30.14	1028	26376	348	N/A	18.73	587	1046	9	0
13031	WINTER HAVEN	N/A	14.00	542	8183	94	N/A	3.41	89	0	0	1
13034	CENTRAL	N/A	9.01	1112	54463	397	N/A	0.73	149	478	3	0
13035	CENTRAL	N/A	4.96	546	765	13	N/A	1.17	87	0	0	0
13036	CENTRAL	N/A	8.91	953	63268	696	N/A	1.46	273	152	1	0
13037	CENTRAL	N/A	5.60	625	14745	120	N/A	4.18	339	83	1	0
13038	EASTERN	N/A	6.55	380	35128	191	N/A	5.12	160	5391	18	0
13039	EASTERN	N/A	7.70	457	20448	94	N/A	12.32	535	7093	42	0
13040	EASTERN	N/A	0.32	3	0	0	N/A	25.53	1199	0	0	0
13041	EASTERN	N/A	6.17	286	45269	190	N/A	25.61	713	2744	8	0
13042	CENTRAL	N/A	6.84	778	23304	185	N/A	0.05	2	452	2	0
13043	CENTRAL	N/A	13.19	1613	100245	702	N/A	2.15	390	104	1	0
13044	CENTRAL	N/A	12.56	1529	20454	172	N/A	0.18	9	144	1	0
13045	CENTRAL	N/A	6.66	974	25646	118	N/A	0.06	17	0	0	0
13046	CENTRAL	N/A	7.80	1129	26682	164	N/A	0.06	3	205	1	0
13047	CENTRAL	N/A	4.15	526	17476	179	N/A	0.31	168	143	2	0
13048	CENTRAL	N/A	7.78	1172	40078	291	N/A	0.26	4	0	0	0

(A) Circuit	(B) District	(C) Number of OH Lateral Lines	(D) Number of OH Lateral Miles	(E) Number of Customers Served on OH Lateral Lines	(F) CMI for OH Lateral Lines	(G) CI for OH Lateral Lines	(H) Number of URD Lateral Lines	(I) Number of URD Lateral Miles	(J) Number of Customers Served on URD Lateral Lines	(K) CMI for URD Lateral Lines	(L) CI for URD Lateral Lines	(M) Number of Automatic Line Sectionalizing Devices on the Lateral
13049	CENTRAL	N/A	5.19	646	12522	134	N/A	5.37	489	0	0	0
13050	CENTRAL	N/A	0.06	2	273	1	N/A	1.26	53	0	0	0
13051	CENTRAL	N/A	1.58	110	28242	81	N/A	5.23	975	481	1	0
13052	CENTRAL	N/A	0.61	475	413	7	N/A	0.25	66	0	0	0
13053	CENTRAL	N/A	9.29	1199	24439	438	N/A	5.67	294	4247	8	0
13054	CENTRAL	N/A	0.43	7	13048	38	N/A	0.79	196	0	0	0
13055	CENTRAL	N/A	0.16	5	34	1	N/A	0.26	32	54	1	0
13057	CENTRAL	N/A	1.29	167	9223	104	N/A	1.23	192	7344	16	0
13059	WESTERN	N/A	7.16	888	38163	433	N/A	1.77	92	3441	15	0
13060	WESTERN	N/A	6.28	801	180675	736	N/A	1.59	575	16856	49	0
13061	WESTERN	N/A	3.50	492	3034	48	N/A	0.64	76	0	0	0
13062	WESTERN	N/A	4.09	610	13249	91	N/A	0.53	19	278	1	0
13063	WESTERN	N/A	5.92	564	5373	97	N/A	12.58	1165	73	1	0
13064	WESTERN	N/A	6.59	887	108769	1244	N/A	7.23	717	1580	8	0
13065	WESTERN	N/A	7.79	916	86829	634	N/A	3.02	450	4462	12	0
13066	WESTERN	N/A	3.00	499	74248	255	N/A	0.01	0	0	0	0
13067	WESTERN	N/A	4.75	640	13847	57	N/A	0.21	9	152	2	0
13068	WESTERN	N/A	5.04	716	11430	61	N/A	1.65	305	285	1	0
13069	WESTERN	N/A	4.27	581	12889	139	N/A	0.45	152	0	0	0
13070	WESTERN	N/A	18.67	465	267645	544	N/A	24.74	364	3839	13	0
13071	WESTERN	N/A	8.42	159	56075	489	N/A	27.29	868	1620	5	0
13072	WESTERN	N/A	7.10	557	31607	224	N/A	0.35	30	0	0	0
13073	WESTERN	N/A	4.61	400	39084	424	N/A	11.31	346	0	0	0
13076	WESTERN	N/A	2.10	122	4546	31	N/A	1.63	113	0	0	0
13077	WESTERN	N/A	9.19	610	12245	80	N/A	0.95	23	473	3	0
13078	WESTERN	N/A	7.77	958	43578	324	N/A	0.42	89	201	1	0
13079	WESTERN	N/A	5.00	545	25540	147	N/A	3.07	825	792	3	0
13080	WESTERN	N/A	7.14	875	43473	442	N/A	1.36	403	318	1	0
13081	WESTERN	N/A	3.13	392	24505	133	N/A	1.36	497	344	2	0
13082	WESTERN	N/A	5.60	795	23099	212	N/A	0.59	292	0	0	0
13084	EASTERN	N/A	3.96	163	20802	166	N/A	1.33	73	1224	3	0
13085	EASTERN	N/A	1.98	60	4372	20	N/A	0.38	4	0	0	0
13086	EASTERN	N/A	3.02	252	19724	47	N/A	0.14	4	223	2	0
13087	EASTERN	N/A	3.19	277	2890	41	N/A	4.03	151	0	0	0
13088	CENTRAL	N/A	3.22	381	9703	143	N/A	1.49	316	5249	35	0
13089	CENTRAL	N/A	6.47	695	62988	276	N/A	2.03	696	0	0	0
13090	CENTRAL	N/A	4.92	661	15891	114	N/A	1.51	350	0	0	0
13091	CENTRAL	N/A	8.87	1295	135449	648	N/A	0.30	6	0	0	0
13092	CENTRAL	N/A	5.02	617	25178	206	N/A	0.36	53	5098	15	0
13093	CENTRAL	N/A	7.31	1057	17296	175	N/A	0.04	1	184	1	0
13094	CENTRAL	N/A	5.76	646	19151	148	N/A	1.59	853	9954	18	0
13096	CENTRAL	N/A	21.75	714	39141	435	N/A	18.45	527	104	1	0

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13097	CENTRAL	N/A	16.56	554	16952	150	N/A	21.04	535	1576	10	0
13098	CENTRAL	N/A	10.98	573	47552	252	N/A	15.80	494	20192	61	0
13099	CENTRAL	N/A	12.28	370	14790	107	N/A	31.69	733	3863	11	0
13100	CENTRAL	N/A	6.12	497	124098	668	N/A	1.09	72	282	1	0
13101	CENTRAL	N/A	3.08	341	2513	28	N/A	0.67	163	345	2	0
13102	CENTRAL	N/A	5.66	748	31088	175	N/A	0.48	18	325	2	0
13103	CENTRAL	N/A	9.78	1400	39937	421	N/A	0.38	11	70	1	0
13104	CENTRAL	N/A	5.63	512	5230	55	N/A	1.73	220	0	0	0
13105	CENTRAL	N/A	6.95	573	14097	159	N/A	2.01	354	829	2	0
13106	CENTRAL	N/A	3.72	423	11175	83	N/A	6.55	2076	23830	70	0
13107	CENTRAL	N/A	4.50	531	28668	283	N/A	11.30	921	3690	26	0
13109	WESTERN	N/A	6.58	604	10899	163	N/A	3.82	1199	939	1	0
13110	WESTERN	N/A	2.10	58	441	2	N/A	1.88	87	0	0	0
13111	WESTERN	N/A	4.86	548	19208	171	N/A	1.55	339	319	1	0
13112	WESTERN	N/A	9.30	756	32653	373	N/A	6.78	419	4159	21	0
13113	WESTERN	N/A	3.32	509	49617	314	N/A	0.08	3	204	1	0
13114	WESTERN	N/A	6.83	633	36121	442	N/A	12.88	1946	759	2	0
13115	WINTER HAVEN	N/A	9.63	679	4342	85	N/A	13.57	373	0	0	0
13117	WINTER HAVEN	N/A	11.22	708	26609	158	N/A	39.18	471	0	0	0
13118	WINTER HAVEN	N/A	10.51	592	11768	177	N/A	20.50	651	0	0	0
13119	PLANT CITY	N/A	1.51	36	0	0	N/A	2.05	623	0	0	0
13120	PLANT CITY	N/A	2.94	69	7634	72	N/A	17.55	838	10411	49	0
13121	PLANT CITY	N/A	3.48	109	0	0	N/A	17.69	662	2765	14	0
13122	PLANT CITY	N/A	4.17	358	1099	8	N/A	1.03	64	0	0	0
13123	PLANT CITY	N/A	7.01	660	9215	60	N/A	1.68	115	760	4	0
13124	PLANT CITY	N/A	16.82	602	21315	90	N/A	8.84	560	0	0	0
13125	PLANT CITY	N/A	3.14	337	412	9	N/A	3.24	88	74	1	0
13127	EASTERN	N/A	2.14	96	33205	212	N/A	29.25	1006	44598	133	0
13128	EASTERN	N/A	4.04	274	27717	269	N/A	10.55	386	9068	51	0
13129	EASTERN	N/A	2.90	274	13041	97	N/A	10.24	415	1144	4	0
13130	EASTERN	N/A	6.04	388	3221	24	N/A	7.54	447	5388	21	0
13132	EASTERN	N/A	1.69	50	82	1	N/A	1.70	99	0	0	0
13133	EASTERN	N/A	21.94	1273	35532	364	N/A	8.01	407	2692	8	0
13134	EASTERN	N/A	3.32	170	7639	78	N/A	5.70	207	14122	62	0
13136	WESTERN	N/A	5.24	466	40585	282	N/A	0.23	7	99	1	0
13137	WESTERN	N/A	1.20	181	31995	175	N/A	2.09	646	286	1	0
13138	WESTERN	N/A	4.08	426	38273	283	N/A	4.13	860	666	3	0
13139	WESTERN	N/A	6.05	542	25235	167	N/A	3.74	971	497	1	0
13140	WESTERN	N/A	4.77	461	2389	38	N/A	0.79	294	0	0	0
13141	WESTERN	N/A	3.77	602	8199	74	N/A	1.44	623	0	0	0
13142	WESTERN	N/A	2.58	471	59004	731	N/A	1.40	512	0	0	0
13143	WESTERN	N/A	2.83	384	22966	169	N/A	0.32	38	0	0	0

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13146	PLANT CITY	N/A	20.62	490	17511	157	N/A	0.88	12	521	2	0
13147	PLANT CITY	N/A	33.11	834	234261	1439	N/A	13.05	281	0	0	0
13148	PLANT CITY	N/A	32.02	650	52990	259	N/A	0.92	36	356	3	1
13150	WINTER HAVEN	N/A	4.91	416	3253	17	N/A	6.38	188	0	0	0
13151	WINTER HAVEN	N/A	2.13	51	176	4	N/A	19.02	1042	48194	142	0
13152	WINTER HAVEN	N/A	4.68	351	6603	66	N/A	15.22	552	0	0	0
13153	WINTER HAVEN	N/A	12.01	1091	29220	250	N/A	9.71	394	234	2	0
13154	WESTERN	N/A	4.02	353	6483	49	N/A	11.42	1458	7631	25	0
13155	WESTERN	N/A	4.35	348	9427	66	N/A	18.34	1317	4392	44	0
13156	WESTERN	N/A	2.52	236	8979	71	N/A	4.15	967	6930	18	0
13157	WESTERN	N/A	0.88	82	14212	103	N/A	17.37	558	13680	29	0
13158	CENTRAL	N/A	8.11	693	22953	177	N/A	4.53	845	2999	13	0
13159	CENTRAL	N/A	7.64	771	89209	444	N/A	1.60	302	431	1	0
13160	CENTRAL	N/A	5.05	540	21955	201	N/A	2.14	391	0	0	0
13161	WESTERN	N/A	2.53	396	2805	30	N/A	0.17	35	215	1	0
13162	WESTERN	N/A	7.97	562	12512	93	N/A	1.17	221	310	2	0
13163	WESTERN	N/A	6.45	806	41868	335	N/A	0.59	110	181	2	0
13164	WESTERN	N/A	8.79	790	39867	305	N/A	1.04	73	36	1	0
13165	WESTERN	N/A	1.61	216	2250	16	N/A	0.50	55	0	0	0
13166	WESTERN	N/A	6.63	892	30675	318	N/A	0.92	407	7904	32	0
13167	WESTERN	N/A	8.52	1113	90803	258	N/A	0.73	208	321	1	0
13169	EASTERN	N/A	1.31	8	8835	155	N/A	18.89	783	5884	28	0
13170	EASTERN	N/A	0.27	10	12790	172	N/A	26.90	716	0	0	0
13171	EASTERN	N/A	10.12	746	95850	369	N/A	18.27	1462	11276	71	0
13172	EASTERN	N/A	3.38	586	24973	191	N/A	2.84	244	830	6	0
13173	EASTERN	N/A	6.01	480	2506	7	N/A	8.06	1215	6833	51	0
13174	EASTERN	N/A	0.30	0	0	0	N/A	7.01	285	0	0	0
13175	CENTRAL	N/A	15.82	1708	42039	544	N/A	0.45	34	119	1	0
13176	CENTRAL	N/A	9.57	828	22835	172	N/A	1.13	43	255	2	1
13177	CENTRAL	N/A	3.53	367	8537	48	N/A	0.57	44	0	0	0
13178	CENTRAL	N/A	2.82	184	980	14	N/A	0.55	44	0	0	0
13180	CENTRAL	N/A	0.95	192	9294	51	N/A	0.43	69	0	0	0
13181	CENTRAL	N/A	2.46	223	990	6	N/A	1.07	581	0	0	0
13183	CENTRAL	N/A	6.69	383	8555	42	N/A	0.39	24	0	0	0
13184	CENTRAL	N/A	1.96	125	4353	42	N/A	0.34	29	1922	6	0
13185	CENTRAL	N/A	2.59	239	15157	107	N/A	11.48	1016	5324	17	0
13186	CENTRAL	N/A	4.30	478	31747	327	N/A	0.55	107	351	1	0
13187	CENTRAL	N/A	6.38	603	26693	173	N/A	8.66	647	514	2	0
13188	CENTRAL	N/A	5.92	455	21389	154	N/A	9.27	583	690	10	0
13189	WESTERN	N/A	2.88	208	732	16	N/A	1.03	43	169	1	0
13190	WESTERN	N/A	12.82	553	326838	2003	N/A	11.00	364	1920	6	1
13191	WESTERN	N/A	5.21	391	1007	15	N/A	2.97	157	1150	10	0



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13192	WESTERN	N/A	4.97	278	5856	38	N/A	13.81	628	0	0	0
13193	WESTERN	N/A	0.00	0	0	0	N/A	17.15	928	0	0	0
13194	WESTERN	N/A	6.36	220	26315	246	N/A	5.00	273	0	0	0
13195	WESTERN	N/A	0.46	50	285	5	N/A	0.11	11	0	0	0
13198	WESTERN	N/A	4.68	713	80320	369	N/A	2.66	174	0	0	0
13199	WESTERN	N/A	4.25	742	8531	86	N/A	0.97	136	0	0	0
13200	WESTERN	N/A	0.30	67	0	0	N/A	0.24	6	906	2	0
13201	WESTERN	N/A	3.11	389	15062	97	N/A	0.68	8	0	0	0
13204	CENTRAL	N/A	7.09	553	15270	177	N/A	4.56	1263	5332	62	0
13205	CENTRAL	N/A	3.78	316	3520	44	N/A	2.06	542	1448	16	0
13206	WESTERN	N/A	11.13	1273	135419	700	N/A	0.25	28	197	1	0
13207	WESTERN	N/A	13.01	661	42994	264	N/A	0.96	27	0	0	0
13208	WESTERN	N/A	7.75	400	45021	167	N/A	1.75	40	656	1	0
13210	WESTERN	N/A	9.70	718	8994	111	N/A	0.35	3	0	0	0
13211	EASTERN	N/A	2.38	85	1238	17	N/A	2.27	426	478	1	0
13213	EASTERN	N/A	22.66	564	215979	1262	N/A	16.59	335	2438	19	0
13214	EASTERN	N/A	6.84	452	4117	190	N/A	7.23	248	917	2	0
13217	WESTERN	N/A	3.40	297	9406	66	N/A	1.01	626	0	0	0
13218	WESTERN	N/A	5.86	583	11633	58	N/A	2.48	750	415	2	0
13219	WESTERN	N/A	10.24	1187	65455	387	N/A	2.68	349	228	2	0
13220	WESTERN	N/A	4.92	456	42750	191	N/A	1.67	277	2240	7	0
13221	CENTRAL	N/A	2.45	88	8500	33	N/A	4.69	854	0	0	0
13222	CENTRAL	N/A	3.21	177	13841	133	N/A	5.13	523	502	1	0
13223	CENTRAL	N/A	5.52	272	16587	107	N/A	1.34	63	0	0	0
13224	CENTRAL	N/A	9.85	915	130206	617	N/A	0.92	188	905	3	0
13225	EASTERN	N/A	5.46	422	19573	89	N/A	8.38	313	1694	5	0
13226	EASTERN	N/A	6.74	500	38127	227	N/A	17.30	1101	0	0	0
13227	EASTERN	N/A	6.43	437	88327	381	N/A	12.74	519	0	0	0
13228	EASTERN	N/A	4.66	293	6148	51	N/A	5.53	343	10984	19	0
13229	EASTERN	N/A	8.66	637	19510	146	N/A	6.75	559	3746	15	0
13230	EASTERN	N/A	4.63	287	3048	30	N/A	7.48	789	25438	65	0
13231	EASTERN	N/A	5.29	473	121820	780	N/A	18.38	792	243	1	0
13233	SOUTH HILLSBOROUGH	N/A	5.75	75	1443	11	N/A	4.00	49	0	0	0
13235	SOUTH HILLSBOROUGH	N/A	0.96	5	562	2	N/A	58.23	1597	0	0	0
13236	SOUTH HILLSBOROUGH	N/A	70.02	653	83108	434	N/A	25.13	294	0	0	1
13237	SOUTH HILLSBOROUGH	N/A	0.01	0	0	0	N/A	6.81	93	0	0	0
13238	SOUTH HILLSBOROUGH	N/A	5.84	2	94	2	N/A	48.73	554	0	0	0
13241	PLANT CITY	N/A	12.18	803	51563	215	N/A	10.02	543	366	2	0
13242	PLANT CITY	N/A	11.08	375	26070	120	N/A	3.68	361	34248	175	1
13243	PLANT CITY	N/A	11.21	882	30036	334	N/A	2.55	295	424	3	0
13250	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13251	CENTRAL	N/A	0.29	2	0	0	N/A	0.01	0	0	0	0

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13252	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	1	0	0	0
13253	CENTRAL	N/A	0.42	1	68838	149	N/A	0.01	0	0	0	0
13254	SOUTH HILLSBOROUGH	N/A	29.94	547	90738	571	N/A	21.61	820	2656	8	1
13256	SOUTH HILLSBOROUGH	N/A	23.17	449	74837	503	N/A	17.89	777	435	2	2
13258	CENTRAL	N/A	0.00	0	0	0	N/A	0.22	13	0	0	0
13259	CENTRAL	N/A	0.00	0	0	0	N/A	0.60	10	0	0	0
13260	CENTRAL	N/A	0.00	0	27305	127	N/A	0.08	0	0	0	0
13261	CENTRAL	N/A	0.00	0	0	0	N/A	0.13	3	0	0	0
13262	CENTRAL	N/A	0.00	0	0	0	N/A	0.00	0	0	0	0
13263	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	2	0	0	0
13264	CENTRAL	N/A	0.00	0	0	0	N/A	0.21	127	195	1	0
13265	CENTRAL	N/A	0.00	0	0	0	N/A	0.26	3	0	0	0
13270	WESTERN	N/A	0.41	34	0	0	N/A	4.66	413	557	2	0
13275	WESTERN	N/A	0.00	0	0	0	N/A	0.16	2	0	0	0
13276	WESTERN	N/A	0.00	0	0	0	N/A	0.45	9	0	0	0
13278	WINTER HAVEN	N/A	8.08	702	9162	73	N/A	1.52	87	6820	62	0
13279	WINTER HAVEN	N/A	4.57	432	334	8	N/A	0.76	29	0	0	0
13280	WINTER HAVEN	N/A	0.19	126	18	3	N/A	0.14	3	0	0	0
13281	WINTER HAVEN	N/A	0.22	2	362	3	N/A	0.17	1	0	0	0
13282	WINTER HAVEN	N/A	11.39	412	20352	144	N/A	2.07	43	0	0	0
13283	WINTER HAVEN	N/A	7.46	522	2036	30	N/A	3.41	214	207	1	0
13288	WINTER HAVEN	N/A	3.63	119	544	11	N/A	1.93	43	3774	10	0
13289	WINTER HAVEN	N/A	4.49	316	1121	21	N/A	2.63	160	270	1	0
13290	WINTER HAVEN	N/A	5.26	608	2929	68	N/A	2.56	334	2172	13	0
13291	WINTER HAVEN	N/A	3.68	317	254	9	N/A	3.91	477	0	0	0
13292	WINTER HAVEN	N/A	2.88	338	9243	137	N/A	1.72	62	0	0	0
13293	WINTER HAVEN	N/A	10.19	901	939	29	N/A	3.61	359	64	1	0
13294	WINTER HAVEN	N/A	8.69	883	4370	89	N/A	0.46	27	140	2	0
13295	WINTER HAVEN	N/A	3.18	222	23920	131	N/A	25.27	865	17591	71	0
13296	WINTER HAVEN	N/A	21.35	439	7237	77	N/A	24.47	822	1318	4	0
13297	WINTER HAVEN	N/A	6.19	521	78107	399	N/A	11.37	701	616	4	0
13298	WINTER HAVEN	N/A	137.29	1066	40220	304	N/A	2.18	30	907	3	5
13299	WINTER HAVEN	N/A	21.02	703	48940	589	N/A	25.42	328	3988	11	0
13302	SOUTH HILLSBOROUGH	N/A	2.99	200	2088	12	N/A	32.26	1356	2282	24	0
13303	SOUTH HILLSBOROUGH	N/A	107.73	1592	301569	1424	N/A	5.33	356	1027	5	3
13304	SOUTH HILLSBOROUGH	N/A	0.76	524	552	8	N/A	25.72	2144	708	12	0
13305	SOUTH HILLSBOROUGH	N/A	25.22	541	46224	197	N/A	8.57	61	66	1	1
13308	WINTER HAVEN	N/A	8.74	730	27521	179	N/A	3.97	509	0	0	0
13309	WINTER HAVEN	N/A	4.07	374	10802	53	N/A	0.22	31	139	1	0
13310	WINTER HAVEN	N/A	2.26	331	1976	45	N/A	0.54	103	441	1	0
13311	WINTER HAVEN	N/A	6.88	668	13172	200	N/A	0.57	87	0	0	0
13312	WINTER HAVEN	N/A	5.26	515	6701	49	N/A	2.59	369	0	0	0

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13313	WINTER HAVEN	N/A	3.15	326	5232	37	N/A	1.23	101	0	0	0
13314	WINTER HAVEN	N/A	2.73	151	0	0	N/A	2.22	294	0	0	0
13315	WINTER HAVEN	N/A	0.00	0	0	0	N/A	0.22	19	0	0	0
13317	WESTERN	N/A	0.71	6	14918	122	N/A	5.65	1034	0	0	0
13318	WESTERN	N/A	0.00	0	0	0	N/A	0.01	2	0	0	0
13319	WESTERN	N/A	0.00	0	0	0	N/A	0.19	1	0	0	0
13320	WESTERN	N/A	0.00	0	0	0	N/A	0.15	4	0	0	0
13321	WESTERN	N/A	0.00	0	0	0	N/A	1.58	16	0	0	0
13322	WESTERN	N/A	0.12	1	0	0	N/A	1.33	569	0	0	0
13323	WESTERN	N/A	1.77	272	5704	35	N/A	2.44	47	0	0	0
13324	EASTERN	N/A	18.27	603	48329	478	N/A	7.04	287	33479	67	0
13325	EASTERN	N/A	1.70	34	29	1	N/A	0.63	13	0	0	0
13326	EASTERN	N/A	9.06	319	8657	79	N/A	2.10	31	228	2	0
13327	EASTERN	N/A	2.86	20	0	0	N/A	0.44	5	0	0	0
13328	DADE CITY	N/A	5.11	522	28420	129	N/A	0.54	37	0	0	0
13329	DADE CITY	N/A	7.80	668	13879	70	N/A	0.76	59	0	0	0
13330	DADE CITY	N/A	34.14	1297	95814	591	N/A	10.05	366	182	2	0
13331	DADE CITY	N/A	28.04	1550	134523	806	N/A	4.27	134	715	3	1
13332	WESTERN	N/A	4.12	162	31431	508	N/A	19.40	1716	5331	22	0
13333	WESTERN	N/A	2.13	193	6699	52	N/A	2.80	341	92	4	0
13334	WESTERN	N/A	4.82	602	17656	55	N/A	1.63	275	0	0	0
13335	WESTERN	N/A	1.44	36	117	1	N/A	1.68	26	0	0	0
13336	WESTERN	N/A	2.71	62	13154	205	N/A	2.73	180	0	0	0
13337	WESTERN	N/A	3.37	254	21531	111	N/A	5.42	2034	20475	105	0
13338	WESTERN	N/A	3.86	145	11427	49	N/A	2.09	275	8963	14	0
13339	WESTERN	N/A	0.48	0	187968	2012	N/A	6.60	1266	0	0	0
13340	SOUTH HILLSBOROUGH	N/A	5.10	64	2679	11	N/A	9.14	367	0	0	0
13341	SOUTH HILLSBOROUGH	N/A	8.80	181	17586	119	N/A	24.85	1719	6494	21	0
13342	SOUTH HILLSBOROUGH	N/A	10.31	410	10225	104	N/A	18.25	784	13471	119	0
13343	SOUTH HILLSBOROUGH	N/A	1.59	13	0	0	N/A	40.06	1263	0	0	0
13344	SOUTH HILLSBOROUGH	N/A	2.53	82	26876	161	N/A	48.22	2369	3563	7	0
13348	CENTRAL	N/A	4.31	552	34664	184	N/A	6.65	1667	15996	39	0
13349	CENTRAL	N/A	0.85	4	2496	32	N/A	2.12	378	6048	18	0
13350	CENTRAL	N/A	0.21	48	2926	14	N/A	1.79	450	0	0	0
13351	CENTRAL	N/A	3.81	424	20074	156	N/A	5.88	1397	0	0	0
13352	CENTRAL	N/A	2.12	98	37104	273	N/A	5.43	1184	4909	27	0
13353	CENTRAL	N/A	0.00	1	0	0	N/A	0.36	59	0	0	0
13354	CENTRAL	N/A	2.08	151	32919	259	N/A	9.07	1553	183	1	0
13358	WESTERN	N/A	6.74	995	37815	232	N/A	0.91	264	0	0	0
13359	WESTERN	N/A	7.69	738	50311	275	N/A	1.40	158	84	1	0
13360	WESTERN	N/A	0.13	13	0	0	N/A	0.03	42	0	0	0
13362	CENTRAL	N/A	0.03	1	0	0	N/A	1.39	194	0	0	0

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13363	CENTRAL	N/A	0.67	27	1582	23	N/A	6.32	1859	5193	49	0
13364	CENTRAL	N/A	0.65	20	19820	154	N/A	6.10	1584	0	0	0
13365	CENTRAL	N/A	2.28	325	67416	801	N/A	7.48	892	7580	10	0
13366	CENTRAL	N/A	0.01	3	246	2	N/A	0.54	5	0	0	0
13367	CENTRAL	N/A	1.21	42	1560	17	N/A	14.24	2135	170	1	0
13368	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13369	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13370	WINTER HAVEN	N/A	11.22	1220	3628	65	N/A	5.51	139	286	2	0
13371	WINTER HAVEN	N/A	10.83	655	19925	96	N/A	17.38	554	11265	41	0
13372	WINTER HAVEN	N/A	6.44	233	506	16	N/A	1.26	47	0	0	0
13373	WINTER HAVEN	N/A	11.63	892	5593	110	N/A	2.78	243	220	1	0
13375	WESTERN	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13376	WESTERN	N/A	0.00	0	0	0	N/A	0.08	5	0	0	0
13377	WESTERN	N/A	4.64	1012	62720	220	N/A	1.40	162	23940	76	0
13378	WESTERN	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13379	WESTERN	N/A	6.54	826	21654	149	N/A	0.31	110	0	0	0
13381	WESTERN	N/A	0.00	0	0	0	N/A	0.01	3	0	0	0
13382	WESTERN	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
13383	WESTERN	N/A	0.00	0	0	0	N/A	0.00	0	0	0	0
13384	WESTERN	N/A	0.00	0	0	0	N/A	0.01	1	0	0	0
13385	WESTERN	N/A	0.00	0	0	0	N/A	0.00	0	0	0	0
13388	PLANT CITY	N/A	12.20	289	23660	364	N/A	8.02	138	1078	2	0
13389	PLANT CITY	N/A	14.68	846	126150	569	N/A	2.38	45	0	0	0
13390	PLANT CITY	N/A	34.54	1160	99633	948	N/A	8.90	371	918	6	0
13391	PLANT CITY	N/A	49.01	1151	92302	646	N/A	8.86	270	0	0	0
13397	CENTRAL	N/A	2.29	203	5454	37	N/A	1.40	340	12568	94	0
13398	CENTRAL	N/A	0.99	17	102	2	N/A	0.64	214	0	0	0
13399	CENTRAL	N/A	0.47	81	222	2	N/A	0.12	18	0	0	0
13400	CENTRAL	N/A	2.40	65	16470	147	N/A	3.47	219	5024	16	0
13405	WESTERN	N/A	9.18	221	6589	76	N/A	2.94	939	2688	8	0
13406	WESTERN	N/A	2.01	67	6700	72	N/A	7.27	204	345	1	0
13412	PLANT CITY	N/A	5.51	322	6897	44	N/A	0.24	20	0	0	0
13414	PLANT CITY	N/A	10.64	769	4231	58	N/A	2.34	110	181	1	0
13417	CENTRAL	N/A	6.44	625	3031	29	N/A	1.43	56	0	0	0
13418	CENTRAL	N/A	9.76	1055	66600	480	N/A	0.93	156	133	1	0
13419	CENTRAL	N/A	11.55	1326	24619	280	N/A	0.79	74	333	1	0
13420	CENTRAL	N/A	5.19	413	53474	289	N/A	8.19	1641	13275	45	0
13422	DADE CITY	N/A	22.54	731	13162	179	N/A	7.08	353	1120	3	0
13423	DADE CITY	N/A	22.52	640	21382	189	N/A	8.52	519	531	1	1
13425	WESTERN	N/A	0.16	7	29695	232	N/A	19.31	952	842	7	0
13426	WESTERN	N/A	5.96	355	32204	251	N/A	28.02	1252	788	2	0
13427	WESTERN	N/A	0.00	0	23711	139	N/A	8.41	328	730	5	0

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13428	WESTERN	N/A	1.55	54	159026	870	N/A	15.51	1165	18710	93	0
13431	DADE CITY	N/A	17.09	452	17350	146	N/A	12.04	323	0	0	1
13432	DADE CITY	N/A	5.17	66	5083	53	N/A	29.83	550	2816	11	1
13433	EASTERN	N/A	9.12	294	1070	11	N/A	3.15	211	0	0	0
13434	EASTERN	N/A	13.46	890	19456	221	N/A	9.05	515	5713	12	0
13435	EASTERN	N/A	5.91	281	42193	160	N/A	1.71	333	156	1	0
13436	EASTERN	N/A	8.53	457	35540	227	N/A	4.90	181	341	2	0
13438	SOUTH HILLSBOROUGH	N/A	10.72	310	99500	688	N/A	4.83	206	60	1	0
13439	SOUTH HILLSBOROUGH	N/A	3.04	397	19136	139	N/A	11.71	443	292	6	0
13440	SOUTH HILLSBOROUGH	N/A	6.03	19	43278	318	N/A	10.46	414	1122	6	0
13442	WINTER HAVEN	N/A	13.89	548	34120	118	N/A	45.74	1096	405	1	1
13443	WINTER HAVEN	N/A	6.01	187	304	3	N/A	9.42	612	1158	6	0
13444	WINTER HAVEN	N/A	5.14	423	2554	41	N/A	2.37	151	0	0	0
13446	WESTERN	N/A	0.00	0	12264	28	N/A	0.59	77	0	0	0
13447	WESTERN	N/A	1.79	80	3705	24	N/A	0.82	44	916	1	0
13448	WESTERN	N/A	1.15	112	907	3	N/A	2.06	305	0	0	0
13449	WESTERN	N/A	2.81	238	15518	160	N/A	1.08	205	95	1	0
13450	WESTERN	N/A	0.81	52	507	8	N/A	3.67	61	0	0	0
13451	WESTERN	N/A	0.22	14	0	0	N/A	2.43	75	0	0	0
13452	WESTERN	N/A	0.24	31	190	2	N/A	0.15	5	0	0	0
13453	WESTERN	N/A	1.00	15	332	3	N/A	4.38	19	0	0	1
13454	EASTERN	N/A	4.67	227	81441	483	N/A	23.76	1490	7715	25	0
13455	EASTERN	N/A	3.20	185	2044	16	N/A	3.44	686	0	0	0
13456	EASTERN	N/A	2.08	149	1839	11	N/A	3.73	795	0	0	0
13457	EASTERN	N/A	2.60	153	6378	47	N/A	7.40	718	2411	7	0
13458	EASTERN	N/A	17.51	569	3388	45	N/A	4.40	30	0	0	0
13459	EASTERN	N/A	12.15	722	25571	179	N/A	17.61	601	501	2	0
13460	EASTERN	N/A	39.26	1165	73599	405	N/A	5.98	176	514	2	1
13461	EASTERN	N/A	27.58	722	20849	129	N/A	6.82	212	0	0	0
13462	PLANT CITY	N/A	3.62	206	4177	57	N/A	11.38	450	3115	11	0
13463	PLANT CITY	N/A	1.75	206	0	0	N/A	0.35	15	41	1	0
13464	PLANT CITY	N/A	3.69	293	2628	39	N/A	1.86	159	5453	41	0
13466	CENTRAL	N/A	2.06	216	13097	39	N/A	1.41	121	0	0	0
13467	CENTRAL	N/A	1.11	35	1556	3	N/A	1.22	227	204	1	0
13468	CENTRAL	N/A	5.66	598	20086	134	N/A	4.13	643	5785	13	0
13469	CENTRAL	N/A	2.22	129	4472	50	N/A	4.57	76	0	0	0
13470	WINTER HAVEN	N/A	16.88	748	17116	187	N/A	9.71	127	300	2	1
13471	WINTER HAVEN	N/A	3.97	380	6296	76	N/A	6.05	232	154	1	0
13473	WINTER HAVEN	N/A	8.53	537	16886	229	N/A	2.78	146	6960	16	1
13479	WINTER HAVEN	N/A	10.31	518	12191	98	N/A	4.89	228	9984	26	0
13480	WESTERN	N/A	1.30	12	5778	54	N/A	26.87	1596	5453	17	0
13481	WESTERN	N/A	0.04	3	0	0	N/A	9.89	838	1611	8	0



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13482	WESTERN	N/A	0.80	8	58466	223	N/A	27.80	1695	5543	14	0
13483	WESTERN	N/A	4.21	377	16639	113	N/A	27.96	1295	6420	21	0
13484	WESTERN	N/A	0.25	6	276	1	N/A	14.84	1392	561	2	0
13485	WESTERN	N/A	3.28	129	10567	153	N/A	11.62	753	0	0	0
13488	SOUTH HILLSBOROUGH	N/A	1.11	81	0	0	N/A	38.31	2867	41999	447	0
13489	SOUTH HILLSBOROUGH	N/A	0.44	93	3082	28	N/A	43.27	2651	3952	18	0
13490	WESTERN	N/A	3.07	359	2452	22	N/A	8.98	395	172	1	0
13491	WESTERN	N/A	2.75	119	68614	337	N/A	17.34	1609	39827	131	0
13492	WESTERN	N/A	5.61	482	11876	44	N/A	4.19	283	622	2	0
13493	WESTERN	N/A	2.18	240	7866	32	N/A	6.86	384	0	0	0
13494	SOUTH HILLSBOROUGH	N/A	0.31	7	0	0	N/A	5.64	431	0	0	0
13495	EASTERN	N/A	6.38	7	27337	127	N/A	2.93	1	0	0	0
13496	CENTRAL	N/A	1.14	74	4238	26	N/A	2.44	193	0	0	0
13497	CENTRAL	N/A	0.85	150	7191	51	N/A	1.80	591	4158	18	0
13498	CENTRAL	N/A	0.28	13	96	1	N/A	0.37	102	0	0	0
13499	CENTRAL	N/A	0.04	2	0	0	N/A	0.39	9	4068	6	0
13501	EASTERN	N/A	1.25	25	386	2	N/A	1.56	164	0	0	0
13502	EASTERN	N/A	4.76	176	5279	55	N/A	20.53	1372	9232	53	0
13504	EASTERN	N/A	0.19	4	0	0	N/A	0.41	8	0	0	0
13505	EASTERN	N/A	3.30	182	3131	41	N/A	7.00	722	650	5	0
13506	EASTERN	N/A	2.76	97	52390	306	N/A	5.33	516	0	0	0
13507	EASTERN	N/A	0.06	0	0	0	N/A	2.82	16	0	0	0
13509	EASTERN	N/A	7.41	289	11801	102	N/A	15.97	1014	1305	6	0
13510	WESTERN	N/A	3.74	394	35274	593	N/A	15.01	558	262	2	0
13511	WESTERN	N/A	3.50	423	2997	25	N/A	6.48	278	1025	5	0
13512	WESTERN	N/A	3.15	357	13812	101	N/A	12.53	1483	28888	52	0
13513	WESTERN	N/A	0.93	39	1181	6	N/A	1.86	95	323	1	0
13514	WESTERN	N/A	2.05	246	3385	76	N/A	6.16	448	3208	9	0
13516	WESTERN	N/A	4.03	461	25002	207	N/A	7.24	343	4588	11	0
13517	WESTERN	N/A	4.04	374	3398	54	N/A	3.67	1071	0	0	0
13518	WESTERN	N/A	0.33	76	0	0	N/A	0.87	4	0	0	0
13519	WESTERN	N/A	0.01	0	0	0	N/A	0.01	0	0	0	0
13520	WESTERN	N/A	1.34	158	16688	129	N/A	2.63	404	5904	16	0
13521	WESTERN	N/A	0.00	10	0	0	N/A	1.73	18	0	0	0
13522	WESTERN	N/A	11.85	1196	86382	387	N/A	0.70	223	0	0	0
13523	WESTERN	N/A	4.85	650	21849	175	N/A	0.05	2	0	0	0
13524	WESTERN	N/A	2.05	141	62	1	N/A	3.37	286	43	1	0
13530	WESTERN	N/A	5.76	832	51583	157	N/A	0.01	0	0	0	0
13531	WESTERN	N/A	3.08	115	10819	29	N/A	3.65	167	489	2	0
13532	WESTERN	N/A	4.63	325	31006	127	N/A	0.61	52	0	0	0
13533	WESTERN	N/A	2.53	264	23819	164	N/A	6.94	972	26352	159	0
13535	WESTERN	N/A	5.38	290	13454	100	N/A	35.75	1892	22011	193	0

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13538	WESTERN	N/A	0.34	11	35030	379	N/A	24.11	874	24404	90	0
13539	WESTERN	N/A	0.90	14	7370	96	N/A	22.47	1109	82220	168	0
13540	WESTERN	N/A	0.23	6	9389	112	N/A	13.59	684	250	1	0
13541	WESTERN	N/A	0.00	0	28285	71	N/A	29.17	1059	0	0	0
13544	WESTERN	N/A	0.89	64	1720	25	N/A	9.48	517	0	0	0
13546	CENTRAL	N/A	7.16	385	18117	67	N/A	1.84	42	0	0	0
13547	CENTRAL	N/A	4.17	268	7548	71	N/A	1.32	16	0	0	0
13551	CENTRAL	N/A	0.05	2	0	0	N/A	0.04	0	0	0	0
13552	CENTRAL	N/A	2.85	54	1373	8	N/A	0.50	8	231	1	0
13553	CENTRAL	N/A	0.00	0	0	0	N/A	1.46	0	0	0	0
13554	CENTRAL	N/A	1.24	0	0	0	N/A	0.01	0	0	0	0
13560	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	2	1348	4	0
13561	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	1	0	0	0
13562	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	3	0	0	0
13563	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	3	0	0	0
13564	CENTRAL	N/A	0.00	0	0	0	N/A	0.07	4	0	0	0
13565	CENTRAL	N/A	0.00	0	0	0	N/A	0.01	1	0	0	0
13572	WESTERN	N/A	0.81	65	29360	179	N/A	19.09	884	16269	93	0
13573	WESTERN	N/A	1.37	23	13749	105	N/A	23.10	1063	6547	16	0
13574	WESTERN	N/A	4.82	266	6929	116	N/A	11.87	627	11804	83	0
13575	WESTERN	N/A	1.83	22	63623	635	N/A	33.31	2325	1011	4	0
13576	EASTERN	N/A	3.14	255	74138	213	N/A	28.47	1221	5647	29	0
13577	EASTERN	N/A	3.08	245	1549	11	N/A	18.70	682	2895	7	0
13579	EASTERN	N/A	10.64	417	112299	804	N/A	33.20	1174	8306	36	0
13582	WESTERN	N/A	6.75	181	29127	205	N/A	22.38	225	90724	152	0
13583	WESTERN	N/A	5.87	131	4531	27	N/A	12.05	824	16544	44	0
13584	WESTERN	N/A	0.16	2	8688	110	N/A	25.07	1060	38813	223	0
13585	WESTERN	N/A	0.55	24	21486	164	N/A	9.79	1805	12558	41	0
13586	WESTERN	N/A	8.67	253	20623	234	N/A	24.17	1026	21675	60	0
13587	WESTERN	N/A	1.73	11	10354	82	N/A	25.23	2695	23443	152	0
13589	WESTERN	N/A	1.17	8	5628	86	N/A	16.33	738	4860	18	0
13590	CENTRAL	N/A	3.46	316	2181	21	N/A	3.19	997	106	1	0
13591	CENTRAL	N/A	7.48	961	37532	257	N/A	0.11	6	321	2	0
13592	CENTRAL	N/A	8.19	1119	34676	340	N/A	0.35	16	0	0	0
13593	CENTRAL	N/A	5.78	690	33871	232	N/A	1.75	83	0	0	0
13600	CENTRAL	N/A	19.40	570	10878	111	N/A	1.70	390	167	1	0
13605	WESTERN	N/A	2.66	273	57627	161	N/A	3.15	288	3240	15	0
13606	WESTERN	N/A	0.29	78	0	0	N/A	0.68	186	0	0	0
13610	WESTERN	N/A	5.40	560	31016	279	N/A	1.94	753	0	0	0
13611	WESTERN	N/A	2.63	314	24897	219	N/A	0.23	396	0	0	0
13612	WESTERN	N/A	8.23	989	87557	669	N/A	1.46	372	235	1	0
13613	WESTERN	N/A	5.51	729	29970	240	N/A	1.37	216	0	0	0

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13614	WESTERN	N/A	0.00	0	0	0	N/A	0.00	0	0	0	0
13621	WESTERN	N/A	15.43	380	114320	1117	N/A	11.03	345	5097	15	1
13622	WESTERN	N/A	23.66	695	21483	178	N/A	11.88	369	261	1	0
13624	WESTERN	N/A	17.26	838	22176	249	N/A	11.62	277	233	1	0
13630	CENTRAL	N/A	6.15	712	87336	415	N/A	2.55	292	83	1	0
13631	CENTRAL	N/A	5.91	385	33812	214	N/A	17.14	894	18958	99	0
13632	CENTRAL	N/A	5.70	481	7939	66	N/A	1.98	118	3391	12	0
13633	CENTRAL	N/A	3.93	170	6009	62	N/A	11.71	1136	4618	14	0
13635	WESTERN	N/A	0.30	20	176	1	N/A	2.45	36	55	1	0
13636	WESTERN	N/A	0.33	14	0	0	N/A	0.66	10	0	0	0
13637	WESTERN	N/A	1.24	93	0	0	N/A	0.69	91	0	0	0
13638	WESTERN	N/A	2.49	198	2493	25	N/A	0.81	133	702	13	0
13639	WESTERN	N/A	0.61	69	458	2	N/A	0.06	87	0	0	0
13645	SOUTH HILLSBOROUGH	N/A	9.19	347	72594	638	N/A	17.51	1858	0	0	0
13646	SOUTH HILLSBOROUGH	N/A	1.35	5	269	2	N/A	29.10	182	0	0	0
13648	SOUTH HILLSBOROUGH	N/A	19.48	389	23749	196	N/A	9.25	226	1006	2	1
13649	SOUTH HILLSBOROUGH	N/A	5.83	551	148016	1051	N/A	0.38	546	0	0	0
13650	SOUTH HILLSBOROUGH	N/A	0.18	0	0	0	N/A	22.23	1441	0	0	0
13651	SOUTH HILLSBOROUGH	N/A	4.14	154	12273	97	N/A	33.41	1345	203	1	0
13652	SOUTH HILLSBOROUGH	N/A	4.94	253	28471	380	N/A	37.66	1450	41636	130	0
13655	PLANT CITY	N/A	9.16	393	1727	18	N/A	11.03	457	0	0	0
13656	PLANT CITY	N/A	40.35	1105	35332	282	N/A	13.39	360	363	3	0
13657	PLANT CITY	N/A	43.55	1033	89988	697	N/A	14.29	256	486	3	0
13659	WINTER HAVEN	N/A	10.15	437	19476	125	N/A	20.23	571	2760	10	0
13660	WINTER HAVEN	N/A	24.14	1021	42784	402	N/A	1.39	149	6322	58	0
13661	WINTER HAVEN	N/A	9.57	381	31261	305	N/A	34.96	996	404	1	0
13668	PLANT CITY	N/A	9.19	562	71172	793	N/A	35.91	1211	0	0	0
13669	WESTERN	N/A	4.13	153	78690	489	N/A	38.42	1931	80	1	0
13670	WESTERN	N/A	1.75	6	10842	79	N/A	17.54	640	3066	11	0
13671	WESTERN	N/A	0.10	3	19596	71	N/A	19.06	1673	18342	67	0
13672	WESTERN	N/A	4.56	246	69624	557	N/A	12.09	1987	11779	58	0
13677	WESTERN	N/A	4.10	93	10962	63	N/A	24.73	817	2280	12	0
13678	WESTERN	N/A	4.67	87	3726	26	N/A	18.42	1832	972	2	0
13679	WESTERN	N/A	10.52	322	85636	607	N/A	29.13	681	5695	18	0
13685	EASTERN	N/A	2.56	129	88200	413	N/A	27.39	890	0	0	0
13686	EASTERN	N/A	3.21	130	16793	125	N/A	34.86	1140	18580	68	0
13687	EASTERN	N/A	16.84	604	97989	846	N/A	21.87	731	6884	22	0
13690	EASTERN	N/A	1.91	91	33669	227	N/A	21.43	718	32172	84	0
13691	EASTERN	N/A	0.86	38	20496	133	N/A	23.60	1521	6183	17	0
13692	EASTERN	N/A	1.30	31	0	0	N/A	15.41	674	264	1	0
13693	EASTERN	N/A	5.04	293	33986	188	N/A	22.87	798	3186	15	0
13695	WINTER HAVEN	N/A	18.44	1118	8814	67	N/A	5.43	327	421	1	1



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13696	WINTER HAVEN	N/A	12.21	926	62173	380	N/A	0.59	2	0	0	0
13697	WINTER HAVEN	N/A	1.24	10	1299	17	N/A	0.05	1	0	0	0
13698	WINTER HAVEN	N/A	19.36	1024	15535	151	N/A	1.74	9	711	2	0
13699	WINTER HAVEN	N/A	6.42	699	99825	305	N/A	20.42	1003	0	0	0
13705	EASTERN	N/A	8.86	517	15472	142	N/A	22.59	865	7125	23	0
13706	EASTERN	N/A	3.93	209	12098	87	N/A	20.96	1117	0	0	0
13707	EASTERN	N/A	1.28	54	10749	54	N/A	18.60	1110	4445	10	0
13708	EASTERN	N/A	3.24	66	22268	69	N/A	27.78	1384	660	10	0
13709	EASTERN	N/A	6.69	832	30233	191	N/A	6.33	368	2780	10	0
13710	EASTERN	N/A	7.23	335	83696	475	N/A	30.51	2172	2649	6	0
13711	EASTERN	N/A	2.04	24	101497	1738	N/A	30.47	2240	115	1	0
13712	EASTERN	N/A	8.83	7	178737	1216	N/A	10.73	1	3957	88	0
13713	CENTRAL	N/A	0.00	1	3256	25	N/A	32.48	2000	1300	4	0
13714	CENTRAL	N/A	0.06	7	13311	87	N/A	12.72	2558	3679	13	0
13715	CENTRAL	N/A	0.04	0	47289	254	N/A	25.13	1419	0	0	0
13716	CENTRAL	N/A	0.02	4	0	0	N/A	11.28	353	0	0	0
13717	CENTRAL	N/A	3.40	16	866	6	N/A	20.98	542	0	0	0
13718	CENTRAL	N/A	0.01	0	352	4	N/A	34.22	843	2183	7	0
13719	CENTRAL	N/A	0.00	0	0	0	N/A	6.48	4	0	0	0
13722	PLANT CITY	N/A	14.71	627	4658	39	N/A	2.99	60	1052	3	0
13723	PLANT CITY	N/A	20.25	658	27260	222	N/A	28.38	809	293	3	0
13724	PLANT CITY	N/A	31.38	843	102628	1440	N/A	20.58	520	1795	5	1
13729	EASTERN	N/A	2.32	93	5817	52	N/A	25.80	1249	2187	11	0
13731	EASTERN	N/A	0.12	4	34663	309	N/A	23.84	869	0	0	0
13732	EASTERN	N/A	0.15	17	19087	67	N/A	35.59	1290	36902	129	0
13733	EASTERN	N/A	1.74	6	785	2	N/A	11.67	273	0	0	0
13737	WESTERN	N/A	3.70	604	2252	35	N/A	0.57	102	857	2	0
13738	WESTERN	N/A	2.39	208	5628	35	N/A	0.55	18	117	1	0
13739	WESTERN	N/A	1.30	70	0	0	N/A	0.68	20	0	0	0
13740	WESTERN	N/A	10.72	1190	43712	178	N/A	0.21	3	0	0	0
13745	WESTERN	N/A	0.81	36	43615	240	N/A	34.82	1984	16123	102	0
13747	WESTERN	N/A	0.81	78	3671	45	N/A	3.43	378	0	0	0
13748	WESTERN	N/A	5.06	373	66648	288	N/A	11.76	763	1364	4	0
13749	WESTERN	N/A	1.26	107	9645	49	N/A	14.73	912	2792	8	0
13750	WESTERN	N/A	1.87	93	2196	11	N/A	10.65	618	4147	13	0
13753	WESTERN	N/A	4.57	627	47968	341	N/A	0.10	8	0	0	0
13754	WESTERN	N/A	13.29	1090	227839	1576	N/A	1.22	234	190	2	0
13756	WESTERN	N/A	3.93	710	60040	289	N/A	1.47	887	0	0	0
13761	WESTERN	N/A	0.69	22	852	4	N/A	1.68	260	278	1	0
13762	WESTERN	N/A	0.05	1	0	0	N/A	0.76	11	119	1	0
13764	WESTERN	N/A	0.14	15	220	1	N/A	1.13	18	0	0	0
13769	WINTER HAVEN	N/A	18.73	383	14784	92	N/A	24.30	654	3104	15	0

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13770	WINTER HAVEN	N/A	4.28	207	20116	221	N/A	43.54	1368	7973	28	0
13772	WINTER HAVEN	N/A	15.74	592	11364	206	N/A	11.97	528	465	1	1
13777	SOUTH HILLSBOROUGH	N/A	2.41	265	5218	39	N/A	22.30	673	121	1	0
13780	SOUTH HILLSBOROUGH	N/A	21.78	586	17446	187	N/A	23.78	719	34832	105	0
13781	SOUTH HILLSBOROUGH	N/A	3.21	58	6621	39	N/A	37.98	1811	76960	113	0
13785	PLANT CITY	N/A	16.78	289	88280	357	N/A	3.35	51	0	0	1
13786	PLANT CITY	N/A	43.50	727	60853	291	N/A	1.10	12	367	3	1
13787	PLANT CITY	N/A	44.60	849	81568	470	N/A	6.95	57	1322	5	0
13793	EASTERN	N/A	4.16	203	6278	64	N/A	29.26	1302	29770	189	0
13795	EASTERN	N/A	6.98	225	19916	303	N/A	41.00	1262	3650	9	0
13796	EASTERN	N/A	5.75	180	22749	239	N/A	16.72	1117	0	0	0
13797	EASTERN	N/A	5.04	277	13319	127	N/A	38.21	1519	10713	55	0
13798	EASTERN	N/A	3.96	174	72677	320	N/A	20.12	968	16123	152	0
13799	EASTERN	N/A	2.84	121	9131	36	N/A	27.99	1515	0	0	0
13805	PLANT CITY	N/A	46.28	963	120484	864	N/A	4.44	56	175	2	0
13807	PLANT CITY	N/A	34.33	1014	66813	645	N/A	3.90	70	412	3	0
13808	PLANT CITY	N/A	106.57	1740	111697	576	N/A	3.26	82	3619	10	3
13813	DADE CITY	N/A	42.37	719	102218	707	N/A	5.02	73	286	1	1
13815	DADE CITY	N/A	46.29	630	66453	733	N/A	7.59	85	483	1	2
13817	SOUTH HILLSBOROUGH	N/A	22.69	749	66137	522	N/A	26.51	558	3001	7	0
13825	CENTRAL	N/A	7.23	363	32914	307	N/A	2.59	611	158	2	0
13826	CENTRAL	N/A	3.84	293	8317	120	N/A	10.82	1171	1175	11	0
13827	CENTRAL	N/A	4.11	352	46297	689	N/A	8.14	381	0	0	0
13828	CENTRAL	N/A	6.22	429	21356	207	N/A	4.25	859	0	0	0
13829	CENTRAL	N/A	1.21	59	925	15	N/A	16.96	799	222	1	0
13830	CENTRAL	N/A	3.80	315	24630	236	N/A	9.87	311	3647	8	0
13831	CENTRAL	N/A	0.83	138	33683	77	N/A	8.39	1039	2000	8	0
13832	CENTRAL	N/A	7.83	231	17179	185	N/A	3.10	154	0	0	0
13835	CENTRAL	N/A	6.01	537	75273	368	N/A	3.73	769	2752	8	0
13836	CENTRAL	N/A	1.19	33	9426	72	N/A	12.19	340	2180	6	0
13837	CENTRAL	N/A	4.44	426	31021	220	N/A	15.45	598	43141	112	0
13838	CENTRAL	N/A	10.58	685	81922	340	N/A	12.82	818	1383	3	0
13839	CENTRAL	N/A	9.07	398	43893	218	N/A	28.13	665	32430	45	0
13840	CENTRAL	N/A	7.90	309	35337	232	N/A	20.52	1491	11231	29	0
13844	CENTRAL	N/A	0.41	11	550	10	N/A	2.69	586	0	0	0
13845	CENTRAL	N/A	0.00	0	0	0	N/A	3.96	0	0	0	0
13850	PLANT CITY	N/A	5.21	301	32726	285	N/A	28.27	743	3124	10	0
13853	PLANT CITY	N/A	3.46	32	48344	701	N/A	42.84	1796	22519	61	0
13854	PLANT CITY	N/A	17.63	1042	37787	318	N/A	30.33	534	3514	14	0
13858	CENTRAL	N/A	0.00	0	0	0	N/A	0.26	0	0	0	0
13860	WESTERN	N/A	2.23	31	351	6	N/A	16.13	1076	9155	33	0
13863	WESTERN	N/A	0.81	12	14323	163	N/A	15.40	698	14974	44	0

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13864	WESTERN	N/A	2.68	136	8410	58	N/A	1.73	330	503	1	0
13865	WESTERN	N/A	5.88	226	31453	165	N/A	20.86	1350	5398	8	0
13866	WESTERN	N/A	4.50	164	5720	42	N/A	5.20	313	24416	35	0
13867	WESTERN	N/A	2.30	112	1200	7	N/A	1.71	90	59	1	0
13869	WESTERN	N/A	0.20	6	3501	41	N/A	11.49	538	2361	9	0
13870	WESTERN	N/A	4.31	78	28429	410	N/A	23.07	1524	147	1	0
13871	WESTERN	N/A	0.33	3	0	0	N/A	18.59	1108	0	0	0
13872	WESTERN	N/A	0.09	3	45060	60	N/A	21.35	937	10278	45	0
13873	WESTERN	N/A	0.71	6	38324	192	N/A	24.37	1167	41387	128	0
13878	EASTERN	N/A	2.11	44	30975	143	N/A	16.04	1825	16352	28	0
13879	EASTERN	N/A	0.44	3	4399	53	N/A	9.15	2532	0	0	0
13880	EASTERN	N/A	0.16	3	134	1	N/A	7.87	851	0	0	0
13881	EASTERN	N/A	0.00	3	0	0	N/A	1.52	105	0	0	0
13882	EASTERN	N/A	0.00	0	0	0	N/A	1.13	105	0	0	0
13883	EASTERN	N/A	1.31	54	1686	12	N/A	5.02	1374	6270	19	0
13884	EASTERN	N/A	0.52	6	6448	248	N/A	28.84	1530	4571	47	0
13885	EASTERN	N/A	0.22	6	0	0	N/A	23.78	1173	4125	15	0
13886	WESTERN	N/A	0.00	1	14702	110	N/A	20.42	1145	7154	27	0
13888	WESTERN	N/A	0.63	131	5210	30	N/A	28.48	1802	26103	59	0
13889	WESTERN	N/A	6.79	151	56984	366	N/A	28.30	924	7057	70	0
13890	WESTERN	N/A	0.72	22	11713	78	N/A	17.02	698	380	4	0
13891	WESTERN	N/A	0.10	1	24559	150	N/A	32.69	1448	17426	76	0
13892	WESTERN	N/A	1.76	67	1186	8	N/A	11.94	808	1349	9	0
13895	WESTERN	N/A	1.04	75	6012	35	N/A	2.13	219	0	0	0
13896	SOUTH HILLSBOROUGH	N/A	7.42	728	8542	64	N/A	10.75	895	1532	4	0
13897	SOUTH HILLSBOROUGH	N/A	5.66	2	0	0	N/A	22.40	136	0	0	0
13898	SOUTH HILLSBOROUGH	N/A	1.76	23	2576	28	N/A	47.96	1191	0	0	0
13899	SOUTH HILLSBOROUGH	N/A	2.20	119	26270	102	N/A	2.66	107	0	0	0
13900	SOUTH HILLSBOROUGH	N/A	6.61	54	841	6	N/A	37.54	671	0	0	0
13906	EASTERN	N/A	5.81	976	91399	985	N/A	4.93	295	713	2	1
13909	EASTERN	N/A	7.77	838	50562	513	N/A	3.58	130	349	1	0
13910	EASTERN	N/A	8.34	348	131209	806	N/A	15.70	605	327	2	0
13911	EASTERN	N/A	6.98	436	18155	262	N/A	14.14	757	20146	44	0
13916	WINTER HAVEN	N/A	2.58	139	36608	208	N/A	23.57	1550	8302	52	0
13918	WINTER HAVEN	N/A	2.08	107	494	6	N/A	23.48	1560	2762	16	0
13919	WINTER HAVEN	N/A	0.32	4	0	0	N/A	1.48	58	0	0	0
13920	WINTER HAVEN	N/A	2.62	52	21075	212	N/A	16.20	1346	0	0	0
13921	WINTER HAVEN	N/A	3.35	156	5706	54	N/A	12.95	544	100	1	0
13922	WINTER HAVEN	N/A	0.72	1	0	0	N/A	48.68	532	0	0	0
13924	WINTER HAVEN	N/A	41.38	491	22064	137	N/A	1.68	35	593	2	0
13927	WINTER HAVEN	N/A	27.42	697	177932	930	N/A	24.17	948	1193	22	1
13928	WINTER HAVEN	N/A	0.00	0	0	0	N/A	0.06	0	0	0	0

(A) Circuit	(B) District	(C) Number of OH Lateral Lines	(D) Number of OH Lateral Miles	(E) Number of Customers Served on OH Lateral Lines	(F) CMI for OH Lateral Lines	(G) CI for OH Lateral Lines	(H) Number of URD Lateral Lines	(I) Number of URD Lateral Miles	(J) Number of Customers Served on URD Lateral Lines	(K) CMI for URD Lateral Lines	(L) CI for URD Lateral Lines	(M) Number of Automatic Line Sectionalizing Devices on the Lateral
13932	CENTRAL	N/A	4.26	166	11599	138	N/A	13.78	423	19149	39	0
13934	CENTRAL	N/A	1.49	23	83839	517	N/A	14.47	1093	6041	25	0
13935	CENTRAL	N/A	2.14	139	14606	46	N/A	6.85	344	8120	20	0
13939	CENTRAL	N/A	2.87	128	12079	111	N/A	18.40	1006	15792	53	0
13942	CENTRAL	N/A	0.44	66	0	0	N/A	0.56	584	97	1	0
13943	CENTRAL	N/A	1.41	54	254	1	N/A	0.52	10	0	0	0
13944	CENTRAL	N/A	0.02	8	0	0	N/A	0.11	527	0	0	0
13946	CENTRAL	N/A	8.85	1135	14842	125	N/A	0.28	20	495	2	0
13947	CENTRAL	N/A	7.41	946	59077	566	N/A	0.34	3	257	2	0
13948	CENTRAL	N/A	6.62	722	22572	222	N/A	2.88	394	346	2	0
13951	EASTERN	N/A	0.94	48	36	2	N/A	1.53	438	564	1	0
13952	EASTERN	N/A	0.79	11	129	2	N/A	2.94	93	0	0	0
13953	EASTERN	N/A	4.44	148	11209	79	N/A	5.63	201	0	0	0
13954	EASTERN	N/A	0.45	14	7341	49	N/A	2.28	90	2004	5	0
13955	EASTERN	N/A	4.20	109	32580	263	N/A	7.19	2072	7505	19	0
13956	EASTERN	N/A	1.66	59	12840	60	N/A	7.57	1057	5203	57	0
13959	PLANT CITY	N/A	15.05	484	91494	687	N/A	5.61	181	0	0	0
13961	PLANT CITY	N/A	20.60	584	83658	499	N/A	32.31	1382	73179	185	0
13962	PLANT CITY	N/A	21.04	881	17681	91	N/A	9.61	472	451	2	1
13963	EASTERN	N/A	4.94	325	22209	139	N/A	1.99	100	3628	8	0
13964	EASTERN	N/A	8.61	507	8272	65	N/A	1.45	49	957	3	0
13967	WINTER HAVEN	N/A	3.84	185	20448	163	N/A	30.32	1303	21588	42	0
13968	WINTER HAVEN	N/A	5.56	572	22925	196	N/A	2.41	441	0	0	0
13971	WINTER HAVEN	N/A	0.05	19	169	1	N/A	0.86	1815	2067	24	0
13972	WINTER HAVEN	N/A	5.02	52	20578	269	N/A	42.92	1294	1203	10	0
13973	WINTER HAVEN	N/A	1.39	3	0	0	N/A	36.00		304	1	0
13980	WINTER HAVEN	N/A	0.71	1	0	0	N/A	0.01	0	0	0	0
13982	PLANT CITY	N/A	1.98	41	196	2	N/A	0.09	0	0	0	0
13983	PLANT CITY	N/A	16.33	483	2077	19	N/A	6.80	146	0	0	0
13984	PLANT CITY	N/A	3.79	153	690	12	N/A	7.59	209	2530	5	0
13985	CENTRAL	N/A	1.16	5	0	0	N/A	30.00	1121	1100	7	0
13986	CENTRAL	N/A	1.33	5	4395	47	N/A	42.14	1674	2376	14	0
13987	CENTRAL	N/A	0.19	2	32803	180	N/A	47.88	2411	24363	79	0
13988	CENTRAL	N/A	0.00	0	9834	66	N/A	43.20	2051	9105	51	0
13989	CENTRAL	N/A	0.19	2	37318	518	N/A	38.16	1374	12577	65	0
13990	CENTRAL	N/A	1.01	5	5318	66	N/A	59.78	1851	2376	22	0
13993	CENTRAL	N/A	5.35	179	5774	94	N/A	24.32	872	4025	25	0
14000	PLANT CITY	N/A	19.31	295	34107	318	N/A	13.01	409	407	3	0
14001	PLANT CITY	N/A	1.19	28	11220	15	N/A	1.92	61	0	0	0
14002	PLANT CITY	N/A	0.52	4	0	0	N/A	26.15	862	7538	33	0
14004	PLANT CITY	N/A	0.05	3	0	0	N/A	0.22	2	564	2	0
14010	CENTRAL	N/A	0.76	24	0	0	N/A	3.11	62	0	0	0

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14011	CENTRAL	N/A	0.48	4	0	0	N/A	8.56	887	0	0	0
14012	CENTRAL	N/A	12.62	211	226039	1900	N/A	4.63	449	189	1	0
14020	SOUTH HILLSBOROUGH	N/A	5.39	269	33456	281	N/A	20.47	1018	4149	10	0
14021	SOUTH HILLSBOROUGH	N/A	9.05	507	187060	1853	N/A	26.73	931	12729	37	0
14022	SOUTH HILLSBOROUGH	N/A	4.76	82	73215	523	N/A	36.47	1194	432	8	0
14023	SOUTH HILLSBOROUGH	N/A	12.85	513	44398	294	N/A	9.15	25	1504	9	0
14024	SOUTH HILLSBOROUGH	N/A	8.82	87	567	7	N/A	26.63	166	0	0	0
14025	SOUTH HILLSBOROUGH	N/A	9.88	15	518	7	N/A	38.45	55	0	0	0
14030	WESTERN	N/A	7.84	234	77153	444	N/A	47.49	1913	24894	162	0
14031	WESTERN	N/A	8.02	358	87224	554	N/A	22.38	1454	6859	20	0
14032	WESTERN	N/A	5.99	100	55157	431	N/A	10.50	583	1595	5	0
14035	WESTERN	N/A	1.10	84	20817	89	N/A	3.64	375	3632	35	0
14036	WESTERN	N/A	0.00	1	84	1	N/A	0.81	38	0	0	0
14037	WESTERN	N/A	1.03	2	7344	36	N/A	30.91	2057	10461	29	0
14040	CENTRAL	N/A	6.69	326	52318	575	N/A	23.56	1812	20876	109	0
14041	CENTRAL	N/A	20.31	224	36772	400	N/A	8.77	82	0	0	0
14042	CENTRAL	N/A	5.33	198	24527	133	N/A	26.01	748	7153	15	0
14050	PLANT CITY	N/A	36.32	444	57919	359	N/A	0.92	3	119	1	2
14051	PLANT CITY	N/A	0.82	0	0	0	N/A	0.07	0	0	0	0
14059	CENTRAL	N/A	0.11	0	33252	102	N/A	2.39	1098	11736	36	0
14064	CENTRAL	N/A	0.00	0	0	0	N/A	0.70	489	0	0	0
14065	CENTRAL	N/A	0.00	0	7450	50	N/A	11.64	1519	14710	54	0
14069	WESTERN	N/A	5.78	213	14849	132	N/A	26.37	787	7137	27	0
14070	WESTERN	N/A	0.16	8	9996	119	N/A	34.08	1162	7093	39	0
14071	WESTERN	N/A	8.86	240	57880	820	N/A	34.01	817	29263	74	0
14079	WESTERN	N/A	0.00	0	0	0	N/A	24.13	2448	6993	9	0
14080	WESTERN	N/A	0.03	0	24265	281	N/A	30.05	1726	64692	141	0
14081	WESTERN	N/A	0.36	5	43372	236	N/A	46.55	2164	26908	73	0
14082	WESTERN	N/A	0.00	0	47717	333	N/A	24.52	539	32706	122	0
14083	WESTERN	N/A	0.48	2	2340	52	N/A	29.00	892	0	0	0
14084	WESTERN	N/A	0.00	2	33594	426	N/A	18.49	611	15009	56	0
14089	CENTRAL	N/A	0.23	5	26113	149	N/A	24.97	1360	16882	52	0
14090	CENTRAL	N/A	0.09	0	10370	61	N/A	10.26	1218	2282	7	0
14091	CENTRAL	N/A	0.73	2	14679	57	N/A	18.39	1040	11952	34	0
14094	CENTRAL	N/A	0.75	8	8280	120	N/A	14.08	1413	6628	24	0
14095	CENTRAL	N/A	0.00	0	1122	11	N/A	26.29	811	2906	36	0
14096	CENTRAL	N/A	0.00	0	0	0	N/A	28.51	1316	6552	12	0
14099	CENTRAL	N/A	2.71	41	3292	10	N/A	16.57	600	0	0	0
14100	CENTRAL	N/A	0.00	0	0	0	N/A	32.94	1715	4639	34	0
14101	CENTRAL	N/A	0.00	0	0	0	N/A	37.70	1136	30516	84	0
14102	CENTRAL	N/A	16.81	206	41215	383	N/A	65.35	2459	3444	12	0
14109	EASTERN	N/A	0.69	10	4213	51	N/A	9.81	1007	0	0	0

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14110	EASTERN	N/A	4.38	139	46783	455	N/A	23.68	646	19753	42	0
14111	EASTERN	N/A	8.06	503	43026	303	N/A	16.37	667	25336	50	0
14112	EASTERN	N/A	3.75	116	25977	209	N/A	18.81	684	2210	5	0
14114	EASTERN	N/A	6.03	284	57262	725	N/A	24.73	1038	8770	81	0
14115	EASTERN	N/A	0.65	30	224	2	N/A	3.12	143	297	1	0
14116	EASTERN	N/A	1.76	92	0	0	N/A	1.67	268	67130	98	0
14117	EASTERN	N/A	0.89	98	2078	25	N/A	1.52	82	0	0	0
14119	PLANT CITY	N/A	0.36	3	53172	614	N/A	52.67	1649	8338	40	0
14120	PLANT CITY	N/A	2.93	87	9990	86	N/A	40.73	1059	0	0	0
14121	PLANT CITY	N/A	19.80	324	69807	590	N/A	47.25	913	80	1	0
14122	PLANT CITY	N/A	0.01	0	0	0	N/A	26.41	807	1904	14	0
14123	PLANT CITY	N/A	6.48	7	504	3	N/A	21.96	0	0	0	0
14144	SOUTH HILLSBOROUGH	N/A	5.48	2	6608	40	N/A	24.30	0	0	0	0
14145	SOUTH HILLSBOROUGH	N/A	0.30	0	0	0	N/A	11.35	246	0	0	0
14196	EASTERN	N/A	0.00	0	0	0	N/A	0.37	2	0	0	0
14197	EASTERN	N/A	2.42	45	72	1	N/A	0.58	43	0	0	0
14198	EASTERN	N/A	2.22	57	2041	23	N/A	3.20	237	0	0	0
14199	EASTERN	N/A	1.21	58	350	2	N/A	0.44	18	0	0	0
14200	SOUTH HILLSBOROUGH	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
14201	SOUTH HILLSBOROUGH	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
14207	EASTERN	N/A	0.32	3	51	1	N/A	0.13	1	0	0	0
14208	EASTERN	N/A	0.08	2	0	0	N/A	0.03	2	0	0	0
14209	EASTERN	N/A	0.00	1	0	0	N/A	0.01	0	0	0	0
14274	WESTERN	N/A	24.91	12	15894	151	N/A	7.33	1	605	2	0
14275	WESTERN	N/A	2.66	0	11058	70	N/A	26.35	62	30285	181	0
14306	DADE CITY	N/A	17.25	29	8573	80	N/A	0.99	6	185	1	0
14310	EASTERN	N/A	0.00	0	0	0	N/A	0.01	0	0	0	0
14341	EASTERN	N/A	6.24	0	3704	16	N/A	6.93	6	514	1	0
4050	WESTERN	N/A	0.27	198	260	4	N/A	0.05	7	0	0	0
4051	WESTERN	N/A	0.04	28	0	0	N/A	0.00	0	0	0	0
4052	WESTERN	N/A	0.26	268	5757	58	N/A	0.04	26	0	0	0
4054	WESTERN	N/A	0.10	271	11136	98	N/A	0.00	0	0	0	0



(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	26.16	0.13	0	0	0	4.32	85	14095	185	-7.9%	5.22
0	YES	18.65	0.09	0	0	0	2.88	56	0	0	-15.8%	3.91
1	YES	47.01	0.05	0	0	0	8.47	68	876	7	-1.9%	4.72
0	YES	27.48	0.00	0	0	0	4.00	31	64156	1777	-12.5%	4.88
0	YES	10.19	0.60	0	0	0	2.49	35	32550	525	-6.1%	3.76
4	YES	76.03	0.08	0	0	0	7.13	162	193178	6480	-10.6%	7.42
0	YES	38.34	0.18	0	0	0	11.00	21	150432	2585	-10.6%	5.85
1	YES	18.96	0.01	0	0	0	8.67	46	47058	405	-10.4%	2.66
0	YES	5.96	0.08	0	0	0	2.22	4	0	0	58.3%	2.40
0	YES	32.21	0.20	0	0	0	4.08	64	102641	1625	0.5%	6.70
0	YES	30.54	0.45	0	0	0	4.23	122	75348	322	-5.4%	5.38
0	YES	2.23	0.58	0	0	0	0.82	0	27993	903	1.4%	4.78
0	YES	2.86	0.91	0	0	0	0.66	44	832	64	-3.5%	4.58
0	YES	2.20	0.13	0	0	0	0.89	0	0	0	-15.2%	1.38
0	YES	43.54	0.67	0	0	0	1.66	0	858	6	-9.9%	5.96
0	YES	25.85	0.29	0	0	0	3.95	62	60643	1300	-7.3%	7.54
0	YES	20.56	0.00	0	0	0	3.73	214	0	0	-4.2%	4.04
0	YES	14.25	0.03	0	0	0	3.30	56	0	0	-10.2%	6.55
0	YES	5.42	0.07	0	0	0	1.09	23	0	0	-12.2%	2.09
0	YES	14.76	0.05	0	0	0	2.42	147	32579	1246	-9.5%	5.47
0	YES	13.80	0.08	0	0	0	2.52	98	734	15	-10.9%	3.91
0	YES	10.66	0.07	0	0	0	1.21	58	180	3	-2.1%	5.15
0	YES	13.38	0.10	0	0	0	1.25	46	12766	982	-17.7%	4.59
0	YES	24.97	0.10	0	0	0	1.02	72	516	6	-12.3%	5.34
0	YES	11.84	0.19	0	0	0	2.07	23	0	0	-16.3%	5.10
1	YES	55.97	0.07	0	0	0	7.03	70	51634	2211	-4.0%	7.41
0	YES	21.87	0.00	0	0	0	4.46	41	32674	1024	-8.1%	2.92
0	YES	13.03	0.07	0	0	0	3.22	68	28	1	-6.8%	4.44
0	YES	8.62	0.05	0	0	0	2.44	30	0	0	-9.9%	5.50
0	YES	14.24	1.48	0	0	0	2.39	134	27934	1211	-6.0%	6.65
0	YES	12.65	0.02	0	0	0	2.85	64	846	6	-14.4%	4.18
0	YES	13.76	0.08	0	0	0	2.01	30	0	0	-3.1%	3.52
0	YES	23.18	0.07	0	0	0	3.09	45	4052	1013	-12.0%	5.00
0	YES	28.18	1.69	0	0	0	0.64	7	42695	1687	-2.9%	7.34
0	YES	36.19	0.18	0	0	0	4.23	48	137705	2700	-4.8%	5.85
0	YES	8.54	0.10	0	0	0	1.55	92	3728	19	-9.7%	3.18
0	YES	17.45	0.10	0	0	0	2.01	153	6076	49	-9.1%	7.49
0	YES	14.44	0.11	0	0	0	1.60	165	259515	5134	-8.0%	6.85
0	YES	9.43	0.20	0	0	0	2.51	91	2955	29	-8.9%	4.53
0	YES	11.22	0.00	0	0	0	3.36	109	50224	1254	-44.3%	4.60
0	YES	5.86	0.05	0	0	0	1.36	54	2187	729	-4.8%	2.39
0	YES	10.83	0.10	0	0	0	2.69	77	0	0	-10.1%	5.23

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	12.85	0.08	0	0	0	2.21	56	0	0	-11.0%	3.79
0	YES	4.65	2.66	0	0	0	0.67	0	0	0	1.6%	7.88
0	YES	8.84	0.10	0	0	0	1.93	33	0	0	-19.2%	4.20
0	YES	1.45	0.05	0	0	0	0.53	15	0	0	-30.6%	4.40
0	YES	17.67	0.19	0	0	0	2.51	124	0	0	75.8%	6.00
0	YES	2.96	0.64	0	0	0	1.10	0	317	21	12.6%	3.60
0	YES	1.08	0.10	0	0	0	0.55	0	0	0	-17.7%	2.36
0	YES	4.23	0.11	0	0	0	1.61	1	0	0	-8.4%	6.93
0	YES	10.97	0.14	0	0	0	1.91	138	570	10	-15.7%	4.30
0	YES	10.87	0.00	0	0	0	3.00	53	2370	10	-10.3%	6.92
0	YES	6.41	0.00	0	0	0	2.28	125	3456	24	-15.9%	3.00
0	YES	7.17	0.00	0	0	0	2.55	34	33256	668	-14.2%	2.31
0	YES	22.46	0.00	0	0	0	3.96	114	242463	6732	-9.4%	6.17
0	YES	18.26	0.06	0	0	0	4.39	141	720	12	-7.0%	7.53
0	YES	12.62	0.00	0	0	0	1.81	139	136766	1654	-12.7%	5.33
0	YES	3.61	0.08	0	0	0	0.52	9	0	0	-1.7%	1.92
0	YES	7.06	0.04	0	0	0	2.06	60	0	0	-5.2%	4.33
0	YES	8.70	0.12	0	0	0	1.89	141	54495	1197	-4.3%	4.96
0	YES	6.87	0.04	0	0	0	2.11	61	72748	788	0.6%	4.77
0	YES	47.55	0.28	0	0	0	3.86	13	36608	796	-5.6%	4.85
0	YES	38.12	0.06	0	0	0	2.35	29	6069	1001	-6.8%	8.17
0	YES	8.74	0.33	0	0	0	0.97	45	123	3	-6.9%	5.05
0	YES	17.72	0.19	0	0	0	1.61	64	9431	213	-10.7%	5.33
0	YES	5.35	0.00	0	0	0	1.63	11	1292	4	-17.3%	4.10
0	YES	13.38	0.00	0	0	0	3.24	79	33304	724	11.5%	5.89
0	YES	9.40	0.19	0	0	0	1.02	28	0	0	-13.3%	5.08
0	YES	10.43	0.17	0	0	0	2.19	81	91120	2774	-2.7%	5.82
0	YES	10.05	0.16	0	0	0	1.38	135	3770	20	-7.8%	5.81
0	YES	5.25	0.02	0	0	0	0.74	53	0	0	-13.6%	4.45
0	YES	7.42	0.03	0	0	0	1.20	24	46452	1106	-10.4%	5.64
0	YES	7.74	0.18	0	0	0	2.27	18	0	0	-29.7%	4.20
0	YES	3.41	0.16	0	0	0	0.88	0	0	0	13.1%	3.76
0	YES	6.15	0.11	0	0	0	2.87	15	0	0	-7.6%	2.72
0	YES	8.58	0.01	0	0	0	1.35	31	288	8	-3.9%	1.94
0	YES	6.25	0.05	0	0	0	1.49	30	216	6	-8.6%	2.71
0	YES	10.31	0.00	0	0	0	1.81	64	57616	1368	-3.7%	5.43
0	YES	9.23	0.38	0	0	0	2.42	51	39732	1102	0.0%	5.68
0	YES	12.08	0.19	0	0	0	2.73	99	428	3	0.3%	5.69
0	YES	7.39	0.16	0	0	0	1.86	89	33572	763	-18.6%	2.70
0	YES	9.12	0.18	0	0	0	1.59	109	152	2	-18.0%	3.90
0	YES	11.84	0.52	0	0	0	3.97	74	0	0	-13.6%	5.36
2	YES	43.40	0.16	0	0	0	3.04	102	0	0	-5.7%	7.58



(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
1	YES	42.76	0.60	0	0	0	4.56	81	0	0	-11.1%	5.56
0	YES	31.37	0.10	0	0	0	4.50	64	62780	326	1.0%	6.49
1	YES	50.17	0.10	0	0	0	6.10	31	60590	730	-8.0%	6.60
0	YES	9.99	0.01	0	0	0	2.77	77	0	0	-19.8%	6.32
0	YES	5.25	0.00	0	0	0	1.51	95	360	5	-7.7%	3.77
0	YES	9.16	0.07	0	0	0	2.95	122	29699	927	-7.3%	3.79
0	YES	13.64	0.08	0	0	0	3.40	148	113011	1594	-12.2%	6.50
0	YES	9.19	0.00	0	0	0	1.83	47	4212	18	2.0%	5.25
0	YES	10.67	0.00	0	0	0	1.71	116	0	0	-7.1%	5.93
0	YES	11.53	0.06	0	0	0	1.21	125	939	17	-6.3%	4.80
0	YES	18.87	0.04	0	0	0	3.03	80	1647	11	-6.0%	6.52
0	YES	11.82	0.18	0	0	0	1.24	221	100902	2234	-25.9%	4.50
0	YES	5.20	0.22	0	0	0	1.00	5	0	0	-5.0%	5.22
0	YES	7.38	0.27	0	0	0	0.71	16	0	0	-6.2%	5.69
0	YES	19.14	0.18	0	0	0	2.89	100	129814	3617	-30.7%	5.30
0	YES	4.44	0.11	0	0	0	0.94	9	0	0	-7.1%	2.13
0	YES	23.17	0.87	0	0	0	2.60	82	222568	5692	3.9%	9.35
0	YES	26.68	0.59	0	0	0	2.90	48	0	0	-5.5%	4.83
0	YES	57.04	2.53	0	0	0	4.11	65	0	0	-1.0%	3.92
0	YES	37.89	0.48	0	0	0	6.40	83	212430	5227	-90.0%	0.50
0	YES	5.51	0.04	0	0	0	1.91	0	0	0	-11.6%	4.46
0	YES	23.57	0.98	0	0	0	2.09	19	42199	1824	-3.2%	5.72
0	YES	24.31	0.28	0	0	0	2.85	41	58	2	-0.4%	8.41
0	YES	6.94	0.09	0	0	0	1.66	23	0	0	-1.4%	5.60
0	YES	12.06	0.04	0	0	0	3.32	60	1780	13	-3.6%	4.50
1	YES	31.56	0.07	0	0	0	5.83	125	95715	2451	-8.1%	6.82
0	YES	9.18	0.85	0	0	0	1.95	37	25600	930	-1.8%	4.38
0	YES	33.94	0.00	0	0	0	2.54	62	463	7	-6.6%	5.70
0	YES	16.34	0.01	0	0	0	1.75	62	2442	11	-62.9%	3.10
0	YES	15.13	0.09	0	0	0	1.90	19	0	0	-14.3%	4.61
0	YES	17.25	0.09	0	0	0	3.58	83	37474	914	-7.2%	5.13
0	YES	4.18	0.03	0	0	0	0.76	1	0	0	-13.3%	2.20
0	YES	32.84	0.00	0	0	0	2.89	55	51576	1698	-6.3%	6.60
0	YES	10.24	0.08	0	0	0	1.14	38	966	12	1.4%	1.59
0	YES	7.00	0.14	0	0	0	1.40	26	18749	508	-7.1%	2.28
0	YES	4.97	0.36	0	0	0	1.31	71	43702	770	-3.8%	5.25
0	YES	9.53	0.10	0	0	0	1.22	74	30330	1011	-11.1%	4.69
0	YES	11.40	0.05	0	0	0	1.56	46	94	1	-5.5%	7.60
0	YES	6.60	0.11	0	0	0	0.93	53	26145	581	-17.9%	2.30
0	YES	6.62	0.30	0	0	0	1.10	58	0	0	-6.8%	5.19
0	YES	5.39	0.24	0	0	0	1.18	137	33448	1114	-7.5%	4.64
0	YES	4.80	0.60	0	0	0	1.05	34	0	0	-16.1%	7.50

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
1	YES	29.98	0.11	0	0	0	8.36	9	23923	509	-17.6%	1.24
0	YES	51.72	0.02	0	0	0	5.55	28	54907	1112	-5.3%	3.16
0	YES	37.18	0.09	0	0	0	4.16	47	43529	660	-20.5%	1.90
0	YES	14.66	0.17	0	0	0	3.20	30	0	0	0.0%	6.27
0	YES	25.46	0.78	0	0	0	3.53	5	26249	947	-6.4%	5.44
0	YES	22.79	0.15	0	0	0	2.74	91	51669	997	-36.0%	4.00
0	YES	24.07	0.02	0	0	0	2.34	75	38300	1532	-3.3%	6.78
0	YES	17.59	0.87	0	0	0	1.30	114	57953	313	-38.9%	4.80
0	YES	26.61	1.70	0	0	0	2.22	80	0	0	-31.9%	5.30
0	YES	8.80	0.05	0	0	0	2.08	36	0	0	-45.0%	2.90
0	YES	20.67	1.55	0	0	0	0.88	36	2064	12	-11.7%	3.39
0	YES	15.13	0.03	0	0	0	2.46	148	3310	10	-10.6%	4.88
0	YES	11.41	0.06	0	0	0	2.12	64	0	0	-10.1%	4.61
0	YES	8.29	0.15	0	0	0	0.95	27	41	1	-19.5%	5.20
0	YES	3.98	0.09	0	0	0	1.20	33	0	0	-47.6%	2.60
0	YES	10.67	0.00	0	0	0	1.52	148	94858	2348	-6.3%	7.01
0	YES	9.05	0.08	0	0	0	1.93	137	0	0	-3.6%	7.01
0	YES	11.24	0.33	0	0	0	1.08	6	0	0	-41.1%	5.30
0	YES	3.23	0.23	0	0	0	0.88	27	0	0	-0.5%	3.40
0	YES	11.43	0.29	0	0	0	3.59	117	95817	2811	5.7%	8.33
0	YES	10.08	0.04	0	0	0	0.79	175	126569	1506	-5.5%	6.48
0	YES	23.75	1.86	0	0	0	1.69	1	0	0	3.2%	7.47
0	YES	32.56	2.55	0	0	0	2.84	2	29445	453	-6.7%	5.85
0	YES	32.39	0.15	0	0	0	3.85	134	0	0	-7.7%	6.53
0	YES	7.75	0.07	0	0	0	1.46	14	148	2	-65.2%	1.70
0	YES	17.56	0.83	0	0	0	2.66	7	0	0	-8.0%	5.58
0	YES	9.24	0.25	0	0	0	1.68	0	0	0	100.0%	2.20
0	YES	22.08	0.29	0	0	0	5.53	117	76946	974	-9.9%	7.87
0	YES	14.70	0.41	0	0	0	3.59	96	64840	2004	158.7%	8.00
0	YES	5.95	0.26	0	0	0	1.58	37	19722	446	-66.3%	2.80
0	YES	6.62	0.15	0	0	0	3.10	3	5589	207	-7.9%	4.69
0	YES	3.71	0.16	0	0	0	2.17	68	1095	5	-1.0%	3.89
0	YES	6.46	0.13	0	0	0	2.80	79	0	0	-2.2%	5.87
0	YES	9.44	0.13	0	0	0	2.23	21	25114	433	-64.8%	2.80
0	YES	4.40	0.16	0	0	0	1.94	7	0	0	0.7%	2.09
0	YES	15.40	0.05	0	0	0	1.27	53	34840	67	-7.8%	3.71
0	YES	7.14	0.00	0	0	0	2.29	120	864	8	-6.3%	2.96
0	YES	17.12	0.07	0	0	0	2.02	66	0	0	-7.8%	4.73
0	YES	17.43	0.00	0	0	0	2.23	95	82169	1123	-10.2%	5.49
0	YES	5.81	0.00	0	0	0	1.90	49	25755	606	-1.2%	5.87
0	YES	26.14	0.09	0	0	0	2.24	154	2182	16	-7.3%	6.55
0	YES	11.57	0.39	0	0	0	2.99	36	31180	535	-7.0%	5.65

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	23.57	1.56	0	0	0	3.23	41	44004	1286	-2.3%	8.92
0	YES	22.95	2.65	0	0	0	3.15	2	0	0	-9.5%	3.73
0	YES	12.71	0.08	0	0	0	1.26	29	807	3	-5.6%	2.77
0	YES	2.81	1.56	0	0	0	0.68	0	0	0	0.0%	4.23
0	YES	10.26	0.29	0	0	0	2.63	40	47956	1795	-13.3%	4.51
0	YES	6.53	0.08	0	0	0	1.22	29	0	0	-4.7%	3.80
0	YES	1.42	0.17	0	0	0	0.70	0	0	0	1.8%	4.43
0	YES	7.39	1.93	0	0	0	1.67	26	0	0	-7.1%	5.55
0	YES	14.11	0.12	0	0	0	2.33	99	113589	3699	-48.4%	3.80
0	YES	7.54	0.13	0	0	0	1.57	50	412	2	-4.8%	2.91
0	YES	14.11	0.14	0	0	0	2.59	103	147611	3758	-1.4%	6.48
0	YES	15.27	0.15	0	0	0	1.15	33	0	0	-12.4%	4.79
0	YES	10.86	0.17	0	0	0	1.19	31	0	0	-9.0%	2.79
0	YES	12.22	0.34	0	0	0	1.83	74	648	8	-12.9%	4.32
0	YES	6.68	0.68	0	0	0	1.35	4	0	0	-20.0%	3.40
0	YES	44.03	0.93	0	0	0	3.86	46	88314	3013	51.8%	7.50
0	YES	17.45	0.54	0	0	0	2.84	15	0	0	-2.1%	4.19
0	YES	7.35	0.93	0	0	0	2.00	82	0	0	2.0%	5.36
0	YES	10.45	0.25	0	0	0	1.86	71	41880	1396	-10.3%	4.26
0	YES	15.61	0.20	0	0	0	2.49	123	225875	5053	-7.5%	6.37
0	YES	8.14	0.18	0	0	0	1.38	14	0	0	-4.9%	3.08
0	YES	8.89	0.17	0	0	0	1.59	26	53237	1068	-15.3%	3.90
0	YES	11.00	0.96	0	0	0	1.71	33	393	7	-13.6%	8.58
0	YES	10.16	0.06	0	0	0	3.24	13	0	0	-3.5%	5.30
0	YES	13.82	0.12	0	0	0	2.94	73	59307	2863	4.2%	5.50
0	YES	15.08	0.11	0	0	0	1.12	22	47418	746	-5.9%	3.81
0	YES	28.11	0.23	0	0	0	3.84	31	240800	1505	3.2%	9.55
0	YES	22.23	0.11	0	0	0	2.95	64	0	0	-7.0%	5.39
0	YES	13.85	0.20	0	0	0	3.46	53	422	7	16.0%	8.50
0	YES	18.27	0.20	0	0	0	2.66	95	0	0	-6.0%	5.58
0	YES	14.60	0.11	0	0	0	2.37	33	125025	3318	62.4%	8.40
0	YES	27.18	0.24	0	0	0	3.27	49	212395	3704	-11.0%	5.80
0	YES	10.87	0.05	0	0	0	1.08	0	0	0	-94.5%	0.40
0	YES	66.32	2.37	0	0	0	4.76	2	0	0	5.8%	6.90
4	YES	107.94	1.80	0	0	0	10.99	47	98503	1914	1.9%	4.45
0	YES	8.99	2.09	0	0	0	0.07	0	0	0	100.0%	0.20
0	YES	59.23	2.68	0	0	0	1.97	0	0	0	100.0%	5.60
0	YES	24.90	0.00	0	0	0	2.70	80	8274	1379	-6.8%	6.37
0	YES	18.25	0.09	0	0	0	3.39	25	35055	725	-6.9%	3.71
0	YES	16.18	0.20	0	0	0	2.23	83	3279	1268	-4.2%	5.94
0	YES	0.15	0.15	0	0	0	0.00	0	0	0	0.0%	0.00
0	YES	0.61	0.16	0	0	0	0.14	0	0	0	0.0%	0.00

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	0.15	0.06	0	0	0	0.08	0	0	0	0.0%	0.00
0	YES	0.56	0.04	0	0	0	0.10	0	0	0	0.0%	0.00
1	YES	65.37	0.24	0	0	0	13.58	118	102026	2291	-17.1%	4.60
0	YES	43.09	0.29	0	0	0	1.74	35	0	0	-13.2%	2.75
0	YES	0.73	0.50	0	0	0	0.00	0	0	0	-15.5%	5.49
0	YES	2.15	1.55	0	0	0	0.00	0	0	0	-11.2%	4.58
0	YES	1.48	1.40	0	0	0	0.00	0	0	0	209.1%	0.60
0	YES	2.00	1.87	0	0	0	0.00	0	0	0	-9.3%	1.66
0	YES	0.02	0.00	0	0	0	0.02	0	0	0	-100.0%	0.00
0	YES	0.20	0.19	0	0	0	0.00	0	0	0	-2.4%	0.95
0	YES	2.20	1.99	0	0	0	0.00	0	0	0	-9.6%	4.71
0	YES	1.12	0.85	0	0	0	0.00	0	0	0	-19.3%	3.94
0	YES	6.50	0.06	0	0	0	1.37	1	0	0	-34.3%	1.70
0	YES	3.93	3.77	0	0	0	0.00	0	0	0	-19.5%	2.50
0	YES	3.58	3.13	0	0	0	0.00	0	0	0	-16.4%	3.35
0	YES	12.94	0.09	0	0	0	3.26	135	33563	1956	-10.1%	2.98
0	YES	10.26	0.00	0	0	0	4.93	34	0	0	-35.9%	4.80
0	YES	1.19	0.68	0	0	0	0.18	0	0	0	100.9%	7.50
0	YES	1.29	0.23	0	0	0	0.67	0	0	0	-95.4%	0.20
0	YES	18.77	0.21	0	0	0	5.11	15	39786	829	0.0%	6.23
0	YES	13.78	0.00	0	0	0	2.90	44	0	0	-5.6%	6.51
0	YES	6.66	0.00	0	0	0	1.09	0	2257	37	12.3%	5.07
0	YES	10.02	0.15	0	0	0	2.75	17	0	0	106.2%	8.10
0	YES	11.28	0.15	0	0	0	3.30	81	52173	1023	-3.3%	3.63
0	YES	9.82	0.00	0	0	0	2.23	20	0	0	-4.2%	5.74
0	YES	7.25	0.11	0	0	0	2.53	48	8174	61	37.9%	2.80
0	YES	17.22	0.04	0	0	0	3.39	153	500	4	-8.2%	4.11
0	YES	12.41	0.19	0	0	0	3.06	99	88227	1008	-10.7%	3.71
0	YES	31.03	0.00	0	0	0	2.58	41	47922	1141	-16.3%	5.36
1	YES	49.65	0.14	0	0	0	3.69	85	1474	30	-7.4%	5.57
0	YES	21.41	0.07	0	0	0	3.79	147	76675	2418	-3.9%	5.46
3	YES	163.07	0.00	0	0	0	23.60	29	161240	2070	-5.3%	5.57
1	YES	55.75	0.71	0	0	0	8.60	60	151595	4046	-5.3%	4.98
0	YES	38.50	1.73	0	0	0	1.53	20	0	0	-30.2%	5.61
2	YES	125.40	0.12	0	0	0	12.22	120	161021	2335	-8.1%	7.69
0	YES	30.33	1.93	0	0	0	1.92	87	45798	898	0.8%	3.69
1	YES	38.88	0.12	0	0	0	4.96	36	21593	189	-0.8%	2.41
0	YES	16.44	0.08	0	0	0	3.65	58	0	0	-3.6%	5.84
0	YES	6.03	0.08	0	0	0	1.67	27	744	4	-13.6%	3.73
0	YES	4.17	0.05	0	0	0	1.31	13	21432	456	3.4%	3.13
0	YES	10.42	0.05	0	0	0	2.92	73	0	0	-12.5%	3.84
0	YES	10.96	0.08	0	0	0	3.03	40	1013	929	13.3%	7.62

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	6.31	0.34	0	0	0	1.58	34	0	0	3.3%	4.90
0	YES	6.77	0.20	0	0	0	1.62	20	0	0	-4.4%	3.84
0	YES	0.87	0.65	0	0	0	0.00	0	0	0	-20.6%	1.40
0	YES	9.76	2.33	0	0	0	1.07	5	36413	917	-46.1%	4.00
0	YES	2.16	2.15	0	0	0	0.00	0	0	0	9.3%	3.63
0	YES	3.33	3.14	0	0	0	0.00	0	0	0	-73.8%	1.20
0	YES	3.81	3.67	0	0	0	0.00	0	0	0	-21.3%	4.96
0	YES	3.99	2.41	0	0	0	0.00	0	0	0	-9.1%	2.77
0	YES	4.40	2.58	0	0	0	0.37	0	0	0	-2.8%	3.50
0	YES	6.09	0.84	0	0	0	1.04	5	0	0	-21.2%	1.77
0	YES	30.51	0.09	0	0	0	5.11	48	50058	927	-4.7%	6.36
0	YES	5.27	0.08	0	0	0	2.86	0	0	0	-49.7%	0.90
1	YES	16.84	0.00	0	0	0	5.68	11	0	0	-10.4%	3.00
0	YES	3.82	0.00	0	0	0	0.51	0	0	0	1.8%	1.39
0	YES	8.73	0.05	0	0	0	3.03	19	27900	450	-6.9%	3.09
0	YES	12.04	0.09	0	0	0	3.40	29	73285	1610	0.6%	4.64
0	YES	51.72	0.14	0	0	0	7.40	86	409518	7125	-9.0%	6.08
1	YES	36.45	0.19	0	0	0	3.95	130	278368	4725	-12.2%	3.51
0	YES	25.86	0.07	0	0	0	2.27	98	62718	1909	-8.1%	6.34
0	YES	6.98	0.16	0	0	0	1.89	21	30382	555	-3.6%	4.43
0	YES	8.81	0.23	0	0	0	2.13	53	47	1	-11.9%	3.94
0	YES	5.50	1.07	0	0	0	1.31	0	2170	62	-3.0%	6.09
0	YES	6.95	0.14	0	0	0	1.37	0	0	0	7.6%	5.10
0	YES	11.60	0.14	0	0	0	2.67	104	0	0	-6.0%	6.19
0	YES	9.34	0.12	0	0	0	3.27	14	16362	350	2.3%	5.81
0	YES	8.72	1.22	0	0	0	0.42	3	26477	83	-5.5%	7.78
0	YES	21.12	1.68	0	0	0	5.21	0	79533	427	-16.6%	2.04
0	YES	39.70	0.36	0	0	0	5.69	47	88968	735	-36.2%	7.50
0	YES	33.73	0.24	0	0	0	4.93	21	25830	1170	-8.0%	5.50
0	YES	42.92	0.67	0	0	0	0.61	0	0	0	-9.3%	6.02
0	YES	56.46	2.44	0	0	0	3.27	15	44980	2249	-21.5%	8.20
0	YES	13.54	0.13	0	0	0	2.45	167	65460	2182	-7.1%	5.99
0	YES	4.71	0.70	0	0	0	1.04	6	0	0	-3.9%	5.81
0	YES	2.46	0.08	0	0	0	0.39	1	0	0	6.2%	5.79
0	YES	11.88	0.27	0	0	0	1.91	88	0	0	-0.8%	5.49
0	YES	9.13	0.11	0	0	0	1.46	71	2800	20	-10.5%	4.18
0	YES	1.97	1.49	0	0	0	0.12	0	0	0	-15.8%	2.16
0	YES	13.72	0.08	0	0	0	2.50	27	0	0	-7.0%	7.46
0	YES	10.13	0.35	0	0	0	2.13	142	405	15	-8.7%	6.99
0	YES	12.95	2.14	0	0	0	1.72	36	167600	838	-5.0%	5.94
0	YES	1.70	0.76	0	0	0	0.78	0	0	0	-43.6%	0.10
0	YES	2.54	0.48	0	0	0	0.64	5	12210	185	-5.2%	6.61

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	8.38	0.05	0	0	0	1.34	13	494	6	-11.9%	3.50
0	YES	8.22	0.08	0	0	0	1.39	2	95244	2884	-5.4%	3.95
0	YES	15.32	1.46	0	0	0	4.10	38	0	0	-3.5%	4.52
0	YES	1.91	0.59	0	0	0	0.77	0	0	0	-0.2%	9.00
0	YES	17.06	0.10	0	0	0	1.52	6	110887	2133	-7.1%	6.67
0	YES	0.36	0.36	0	0	0	0.00	0	0	0	-15.9%	4.60
0	YES	0.38	0.38	0	0	0	0.00	0	0	0	-7.6%	4.73
0	YES	21.65	0.07	0	0	0	4.84	58	56040	1401	2.3%	5.46
0	YES	32.66	0.42	0	0	0	4.02	42	14630	285	-15.1%	5.65
0	YES	8.81	0.12	0	0	0	0.99	2	0	0	3.5%	6.06
0	YES	17.97	0.17	0	0	0	3.40	118	11633	1270	-4.5%	5.11
0	YES	0.86	0.86	0	0	0	0.00	0	0	0	-12.9%	1.55
0	YES	0.94	0.86	0	0	0	0.00	0	0	0	-20.9%	1.45
0	YES	9.35	0.85	0	0	0	2.47	0	135967	2213	-4.5%	5.82
0	YES	0.03	0.02	0	0	0	0.00	0	0	0	100.0%	0.01
0	YES	9.23	1.39	0	0	0	0.99	178	163484	2084	-23.2%	4.33
0	YES	1.52	1.51	0	0	0	0.00	0	0	0	39.1%	4.20
0	YES	1.03	1.02	0	0	0	0.00	0	0	0	40.5%	5.40
0	YES	0.03	0.00	0	0	0	0.03	0	0	0	-100.0%	0.00
0	YES	0.76	0.74	0	0	0	0.00	0	0	0	-0.4%	3.87
0	YES	0.04		0	0	0	0.04	0	0	0	-52.1%	0.00
0	YES	22.82	0.59	0	0	0	2.00	48	0	0	-56.0%	2.30
0	YES	22.80	0.04	0	0	0	5.71	119	197121	3831	-12.8%	3.89
1	YES	49.86	0.26	0	0	0	6.16	232	141714	2224	-20.7%	5.30
1	YES	68.23	1.39	0	0	0	8.97	116	1206	12	-2.4%	6.75
0	YES	5.91	1.05	0	0	0	1.17	18	0	0	6.6%	3.55
0	YES	3.11	0.68	0	0	0	0.79	0	0	0	16.1%	2.10
0	YES	1.16	0.18	0	0	0	0.39	0	0	0	-10.3%	1.04
2	YES	7.04	0.05	0	0	0	1.12	19	0	0	-16.0%	2.42
0	YES	15.07	0.57	0	0	0	2.37	14	0	0	-80.1%	1.40
0	YES	13.85	0.28	0	0	0	4.29	3	4830	230	-15.7%	2.80
0	YES	10.12	0.01	0	0	0	4.34	31	4200	14	3.7%	3.94
0	YES	15.16	0.04	0	0	0	2.13	64	214080	3780	-7.5%	5.82
0	YES	10.63	0.22	0	0	0	2.54	133	514	7	-3.0%	5.68
0	YES	13.40	0.11	0	0	0	2.59	185	122425	1045	-12.0%	5.40
0	YES	14.83	0.11	0	0	0	2.37	126	756	6	-9.0%	6.55
0	YES	15.45	0.05	0	0	0	2.01	99	618	11	-10.3%	6.17
1	YES	43.47	0.09	0	0	0	13.75	48	174	3	-9.2%	4.04
1	YES	38.79	0.18	0	0	0	7.57	59	174	1	-3.1%	3.88
0	YES	21.85	1.59	0	0	0	0.80	0	0	0	-13.0%	4.11
0	YES	35.12	0.08	0	0	0	1.05	35	164	1	-4.9%	6.40
0	YES	8.60	0.07	0	0	0	0.12	0	0	0	-0.3%	1.30



(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	19.64	0.05	0	0	0	2.52	58	64694	1259	-1.6%	5.01
0	YES	34.66	0.90	0	0	0	4.63	64	0	0	-13.5%	3.40
1	YES	37.43	0.00	0	0	0	2.42	33	0	0	-5.6%	5.29
0	YES	16.01	0.41	0	0	0	3.32	16	121961	818	-4.0%	5.60
0	YES	26.69	0.09	0	0	0	4.09	118	2774	22	-7.6%	6.33
0	YES	10.92	0.08	0	0	0	3.22	5	37448	604	-22.9%	1.80
0	YES	16.79	0.13	0	0	0	3.23	31	21266	686	-4.8%	3.57
0	YES	18.05	0.89	0	0	0	1.60	12	0	0	-0.5%	3.33
0	YES	19.05	0.70	0	0	0	3.59	66	90615	1815	-47.1%	4.90
0	YES	22.41	0.61	0	0	0	5.31	8	32032	588	0.0%	5.10
0	YES	64.21	0.38	0	0	0	4.19	96	20036	224	-1.4%	7.13
0	YES	17.74	0.04	0	0	0	2.26	48	221	3	4.3%	3.14
0	YES	9.71	0.50	0	0	0	1.71	22	33770	614	-2.5%	2.68
0	YES	2.01	1.42	0	0	0	0.00	0	0	0	-6.7%	3.62
0	YES	4.00	0.22	0	0	0	1.17	0	6057	253	0.5%	7.12
0	YES	4.59	0.76	0	0	0	0.62	11	19548	326	13.0%	3.43
0	YES	5.85	1.26	0	0	0	0.70	18	0	0	-6.2%	4.62
0	YES	6.92	1.19	0	0	0	1.25	0	0	0	1.8%	5.86
0	YES	4.00	0.29	0	0	0	1.05	0	0	0	3.7%	5.35
0	YES	1.10	0.13	0	0	0	0.57	0	0	0	-31.3%	1.20
0	YES	9.43	3.33	0	0	0	0.72	0	0	0	0.7%	7.43
0	YES	30.79	0.15	0	0	0	2.20	33	2096	10	-4.1%	6.89
0	YES	8.65	0.13	0	0	0	1.88	56	484	4	-11.7%	4.32
0	YES	8.22	0.67	0	0	0	1.73	25	22344	608	-1.8%	4.94
0	YES	12.52	0.01	0	0	0	2.50	24	0	0	-11.3%	3.71
0	YES	28.33	0.68	0	0	0	5.74	57	3959	107	-79.3%	0.70
0	YES	35.71	2.00	0	0	0	3.97	82	186274	4067	-29.4%	4.80
1	YES	51.86	0.13	0	0	0	6.49	98	148743	3330	-7.7%	6.47
0	YES	41.20	0.19	0	0	0	6.60	30	579	6	43.2%	6.90
0	YES	18.20	0.44	0	0	0	2.76	42	77567	2066	-0.8%	6.24
0	YES	5.08	0.00	0	0	0	2.98	81	0	0	-6.8%	6.79
0	YES	7.45	0.13	0	0	0	1.77	21	0	0	-8.4%	2.42
0	YES	5.55	0.12	0	0	0	1.96	15	18921	357	7.1%	4.02
0	YES	4.21	0.03	0	0	0	1.85	9	16933	574	-25.1%	1.25
0	YES	12.65	0.07	0	0	0	2.78	72	255	1	-6.2%	4.20
0	YES	9.88	0.22	0	0	0	2.88	7	198	3	-0.2%	7.13
0	YES	30.01	0.04	0	0	0	3.38	40	381	3	-16.9%	3.36
0	YES	13.46	0.18	0	0	0	3.26	34	14725	589	-13.4%	2.41
0	YES	15.11	0.07	0	0	0	3.73	41	139040	1737	3.1%	3.36
0	YES	20.78	0.04	0	0	0	5.54	54	66431	2465	-3.2%	4.64
0	YES	28.79	0.03	0	0	0	0.59	4	0	0	-12.5%	5.15
0	YES	13.85	1.42	0	0	0	2.50	0	100605	1473	-5.9%	3.09

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	31.43	0.89	0	0	0	1.94	5	0	0	-13.6%	6.69
0	YES	36.57	2.85	0	0	0	1.55	72	0	0	-15.4%	6.87
0	YES	18.71	0.62	0	0	0	3.01	19	85766	1406	-2.5%	5.25
0	YES	17.82	0.53	0	0	0	2.39	13	0	0	-4.8%	6.59
0	YES	43.12	0.89	0	0	0	2.81	202	101399	2253	-10.8%	6.35
0	YES	48.87	3.22	0	0	0	1.95	12	56088	2337	-4.1%	6.82
0	YES	13.99	0.07	0	0	0	1.87	50	0	0	59.2%	3.40
0	YES	23.17	0.18	0	0	0	2.90	32	0	0	-8.8%	4.99
0	YES	11.78	0.30	0	0	0	1.67	93	128	2	-3.8%	5.79
0	YES	11.22	0.52	0	0	0	1.66	87	3759	12	-8.6%	2.72
0	YES	8.44	0.87	0	0	0	1.62	4	0	0	-57.3%	2.20
0	YES	12.86	0.07	0	0	0	3.48	0	0	0	100.0%	0.21
0	YES	7.40	1.72	0	0	0	2.09	6	14238	226	0.0%	6.71
0	YES	5.14	0.32	0	0	0	2.17	10	47160	655	12.2%	3.36
0	YES	2.05	0.37	0	0	0	1.02	0	0	0	100.0%	0.96
0	YES	1.61	0.33	0	0	0	0.86	0	0	0	-15.9%	0.85
0	YES	4.84	0.40	0	0	0	1.63	2	0	0	-5.6%	6.07
0	YES	28.03	1.14	0	0	0	1.59	72	243	4	-1.3%	9.19
0	YES	3.22	1.83	0	0	0	0.80	0	0	0	-6.5%	4.75
0	YES	12.92	1.13	0	0	0	1.49	24	0	0	-6.3%	6.32
0	YES	10.75	1.01	0	0	0	1.66	4	0	0	-2.4%	5.26
0	YES	6.12	2.51	0	0	0	0.73	0	0	0	-14.0%	1.28
0	YES	27.87	1.21	0	0	0	3.27	34	1184	8	-2.4%	6.48
0	YES	20.75	0.06	0	0	0	1.94	24	0	0	-5.7%	4.96
0	YES	13.03	1.19	0	0	0	1.87	35	0	0	57.3%	5.70
0	YES	18.68	0.57	0	0	0	2.44	77	282	3	-7.6%	5.43
0	YES	3.74	0.46	0	0	0	0.49	0	0	0	0.3%	5.56
0	YES	11.88	0.18	0	0	0	3.49	14	0	0	11.7%	5.02
0	YES	12.83	0.05	0	0	0	1.51	48	91014	846	-11.6%	5.09
0	YES	9.64	0.04	0	0	0	1.89	60	46794	1458	-11.7%	6.57
0	YES	2.55	0.30	0	0	0	1.05	1	0	0	-15.1%	5.20
0	YES	0.13	0.01	0	0	0	0.11	0	0	0	100.0%	1.30
0	YES	6.46	0.60	0	0	0	1.90	19	18155	576	-0.4%	4.64
0	YES	2.25	0.19	0	0	0	0.33	0	0	0	9.9%	1.40
0	YES	14.40	0.16	0	0	0	1.69	118	1471	14	-4.8%	6.15
0	YES	6.80	0.18	0	0	0	1.72	116	1224	17	-60.1%	2.90
0	YES	7.51	0.33	0	0	0	1.76	39	1122	11	-7.3%	6.95
0	YES	6.69	0.26	0	0	0	0.67	11	0	0	-5.5%	3.53
0	YES	9.83	0.61	0	0	0	2.50	20	0	0	-15.3%	4.21
0	YES	7.15	0.03	0	0	0	1.87	68	478	7	-6.3%	5.40
0	YES	12.37	0.01	0	0	0	2.90	64	60	1	-8.1%	5.82
0	YES	44.25	0.63	0	0	0	2.49	107	108	3	-11.3%	8.18



(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	27.58	1.80	0	5016	114	1.33	8	29140	1364	-6.9%	6.41
0	YES	25.52	0.22	0	0	0	1.94	6	67848	1028	2.6%	5.16
0	YES	15.84	0.25	0	0	0	1.76	2	0	0	-13.2%	3.02
0	YES	30.90	1.73	0	0	0	0.00	0	0	0	-5.7%	5.59
0	YES	12.56	0.14	0	0	0	2.06	1	22192	584	-12.3%	3.29
0	YES	15.05	0.48	0	0	0	5.56	18	54026	454	-14.8%	7.10
0	YES	8.98	0.16	0	0	0	3.32	52	0	0	-37.0%	1.99
0	YES	0.44	0.09	0	0	0	0.26	0	0	0	46.2%	0.70
0	YES	5.24	0.23	0	0	0	1.66	0	0	0	-20.0%	3.11
0	YES	1.89	0.42	0	0	0	0.00	0	171	3	-174.2%	-1.30
0	YES	1.65	0.35	0	0	0	0.05	0	101	2	-14.2%	2.00
0	YES	2.42	2.41	0	0	0	0.00	0	0	0	-0.7%	2.23
0	YES	3.91	3.90	0	0	0	0.00	0	0	0	-1.3%	2.99
0	YES	3.91	3.91	0	0	0	0.00	0	0	0	-16.8%	3.16
0	YES	2.64	2.64	0	0	0	0.00	0	0	0	-3.0%	2.48
0	YES	2.50	2.43	0	0	0	0.00	0	0	0	-1.0%	3.30
0	YES	3.00	2.98	0	0	0	0.01	0	0	0	-10.5%	2.46
0	YES	21.10	0.27	0	0	0	0.93	6	5	1	-8.7%	3.62
0	YES	26.40	0.94	0	0	0	0.98	5	30747	1059	-8.1%	4.36
0	YES	18.44	0.78	0	0	0	0.98	16	0	0	-7.6%	3.77
0	YES	38.11	0.14	0	0	0	2.83	35	67716	1249	-7.9%	7.27
0	YES	36.47	0.43	0	0	0	4.42	90	87149	1373	-7.6%	6.94
0	YES	25.18	0.00	0	0	0	3.40	58	37	1	-15.3%	4.25
0	YES	47.75	0.20	0	0	0	3.72	86	76682	1667	-12.6%	7.58
0	YES	34.39	1.80	0	0	0	3.45	3	53028	982	42.2%	7.20
0	YES	22.35	0.31	0	0	0	4.12	11	0	0	-0.4%	4.89
0	YES	27.47	0.07	0	0	0	2.17	6	34926	610	-10.1%	4.72
0	YES	12.01	0.46	0	0	0	1.21	1	19740	470	-6.2%	6.76
0	YES	36.19	0.46	0	0	0	2.89	5	700	4	-5.8%	6.52
0	YES	29.70	0.79	0	0	0	1.95	6	121224	2131	-31.2%	7.40
0	YES	22.18	1.73	0	0	0	2.94	1	94	1	-5.7%	3.54
0	YES	9.76	0.06	0	0	0	3.05	202	2763	9	-6.3%	6.40
0	YES	10.29	0.14	0	0	0	2.57	122	86038	1122	-5.7%	3.97
0	YES	10.84	0.45	0	0	0	1.85	101	11205	249	-6.0%	4.84
0	YES	10.25	0.15	0	0	0	2.57	38	50209	759	-10.2%	4.22
0	YES	21.91	0.19	0	0	0	0.62	17	127140	3088	76.9%	5.40
0	YES	6.77	0.15	0	0	0	0.80	56	1057	14	-7.6%	2.46
0	YES	2.94	0.08	0	0	0	1.90	18	13590	278	-78.9%	0.70
0	YES	9.16	0.27	0	0	0	1.54	47	40768	1274	-6.4%	5.79
0	YES	4.52	0.20	0	0	0	1.45	59	0	0	-11.7%	2.25
0	YES	10.99	0.16	0	0	0	1.14	71	61776	1398	-7.2%	4.78
0	YES	8.22	0.27	0	0	0	1.08	66	0	0	-12.2%	3.23

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	0.04	0.00	0	0	0	0.04	0	0	0	0.0%	0.00
2	YES	29.49	0.65	0	0	0	2.37	43	13280	80	-9.5%	5.41
0	YES	39.03	0.17	0	0	0	3.32	64	108361	590	-7.0%	5.52
1	YES	32.78	0.06	0	0	0	3.85	52	612	4	-15.4%	5.80
0	YES	11.99	0.00	0	0	0	3.29	135	0	0	-2.1%	5.78
0	YES	25.28	0.29	0	0	0	1.94	72	44602	1342	-61.5%	6.58
0	YES	9.51	0.05	0	0	0	1.78	99	630	10	165.1%	2.76
0	YES	19.52	0.15	0	0	0	3.73	91	38679	1314	-8.6%	7.94
0	YES	5.77	1.34	0	0	0	1.68	0	0	0	-15.0%	3.90
0	YES	2.88	0.75	0	0	0	1.16	0	0	0	-6.1%	7.23
0	YES	3.96	0.14	0	0	0	1.88	2	27	1	-17.3%	1.43
0	YES	4.91	0.35	0	0	0	1.26	3	0	0	4.4%	1.90
0	YES	1.97	0.20	0	0	0	1.11	0	0	0	-33.3%	0.80
1	YES	31.25	0.77	0	0	0	3.78	38	148985	4429	-3.7%	9.60
0	YES	34.28	3.12	0	0	0	0.71	0	0	0	-52.2%	2.34
0	YES	34.14	0.03	0	0	0	5.38	78	2328	12	-6.1%	5.85
1	YES	7.84	0.08	0	0	0	1.55	85	72090	3681	-0.2%	6.70
0	YES	25.64	2.15	0	0	0	1.07	0	0	0	-4.4%	5.90
0	YES	42.67	1.03	0	0	0	4.09	33	692	8	-10.3%	7.26
0	YES	49.29	1.56	0	0	0	5.13	35	613	4	-26.3%	7.30
0	YES	24.31	0.14	0	0	0	3.98	41	0	0	-5.6%	5.46
1	YES	62.72	0.17	0	0	0	8.81	129	322759	5552	-9.3%	6.94
0	YES	66.31	0.17	0	0	0	8.30	125	26790	95	43.7%	6.50
1	YES	32.80	0.01	0	0	0	2.42	51	396	6	-6.6%	4.77
0	YES	28.30	0.10	0	0	0	2.66	80	191	7	-4.3%	4.60
0	YES	47.58	0.79	0	0	0	2.27	30	52758	977	-4.9%	6.66
0	YES	48.89	2.27	0	0	0	1.51	45	35516	1366	-18.7%	6.78
0	YES	47.04	0.95	0	0	0	3.53	54	224	2	-10.1%	8.97
0	YES	20.29	0.11	0	0	0	0.90	1	0	0	-39.7%	3.60
0	YES	21.99	1.31	0	0	0	1.52	18	0	0	38.5%	7.80
0	YES	20.96	0.84	0	0	0	3.47	12	170480	4206	-2.8%	6.08
0	YES	36.63	4.92	0	0	0	2.88	2	112548	885	-5.7%	6.05
0	YES	26.15	1.13	0	0	0	1.92	2	0	0	-4.8%	5.52
0	YES	44.99	0.69	0	0	0	4.66	57	191840	4394	-7.4%	7.88
0	YES	34.68	1.94	0	0	0	2.79	64	65459	1021	-23.0%	6.20
0	YES	41.20	0.10	0	0	0	3.03	24	0	0	-9.3%	7.73
0	YES	45.27	0.17	0	0	0	6.39	118	55397	1409	-7.7%	6.80
0	YES	26.17	1.23	0	0	0	1.60	23	190	5	-13.6%	5.51
0	YES	27.71	0.71	0	0	0	2.53	2	176	2	17.3%	9.80
0	YES	18.91	0.16	0	0	0	2.03	6	0	0	-13.7%	2.87
0	YES	31.62	0.98	0	0	0	2.73	57	37763	1168	-8.8%	7.01
0	YES	26.36	0.02	0	0	0	2.47	23	0	0	-28.7%	6.30

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	17.96	0.09	0	0	0	5.08	0	57992	1344	100.0%	6.43
0	YES	2.73	0.03	0	0	0	1.41	0	0	0	100.0%	0.34
0	YES	24.26	0.03	0	0	0	3.12	101	17352	1167	-9.1%	6.98
0	YES	28.52	0.42	0	0	0	1.27	26	824	4	-48.1%	3.80
0	YES	34.69	0.14	0	0	0	3.10	24	0	0	-6.4%	6.87
0	YES	29.08	1.62	0	0	0	2.57	32	277	1	-6.5%	6.18
0	YES	23.48	0.90	0	0	0	2.69	19	116792	3405	-5.3%	4.75
0	YES	36.66	1.62	0	0	0	4.01	16	45276	1372	-5.3%	7.18
0	YES	15.59	0.11	0	0	0	2.46	62	84206	2382	-4.0%	3.21
0	YES	40.82	0.28	0	0	0	2.81	47	0	0	-5.0%	8.83
0	YES	36.72	1.05	0	0	0	3.17	7	14529	501	3.0%	7.93
0	YES	25.13	0.54	0	0	0	5.03	0	123501	2543	-52.5%	5.16
0	YES	37.36	4.22	0	0	0	0.66	4	0	0	59.6%	9.58
0	YES	16.70	2.12	0	0	0	1.80	4	0	0	-9.6%	5.43
0	YES	29.48	2.22	0	0	0	2.09	4	74442	1306	-42.2%	6.30
0	YES	15.62	0.51	0	0	0	3.80	1	0	0	-5.8%	3.78
0	YES	29.00	0.51	0	0	0	4.11	4	0	0	-15.0%	3.54
0	YES	38.01	2.68	0	0	0	1.10	1	0	0	-5.6%	6.00
0	YES	10.27	2.59	0	0	0	1.20	0	0	0	12.1%	3.30
0	YES	23.07	0.03	0	0	0	5.34	15	0	0	34.4%	5.60
0	YES	55.06	0.05	0	0	0	6.39	46	336	7	-2.8%	7.98
0	YES	59.56	0.10	0	0	0	7.50	78	13290	273	-4.8%	7.42
0	YES	31.38	0.66	0	0	0	2.60	13	0	0	-4.4%	8.98
0	YES	26.38	1.15	0	0	0	1.28	1	22620	870	-6.5%	4.25
0	YES	37.63	1.69	0	0	0	0.21	0	0	0	-9.3%	7.71
0	YES	17.04	0.01	0	0	0	3.63	0	0	0	-23.0%	2.30
0	YES	7.03	0.16	0	0	0	2.61	60	2712	16	-9.1%	4.54
0	YES	4.80	0.22	0	0	0	1.64	21	21627	243	-7.1%	4.77
0	YES	3.81	0.24	0	0	0	1.59	0	3420	90	-5.7%	3.43
0	YES	12.98	0.24	0	0	0	1.82	77	3882	1294	-4.5%	5.69
0	YES	38.46	0.18	0	0	0	2.65	17	0	0	-6.7%	6.97
0	YES	5.39	0.20	0	0	0	0.94	29	16800	400	-13.6%	1.74
0	YES	20.60	0.44	0	0	0	3.35	34	63660	1211	-7.3%	7.55
0	YES	17.88	0.30	0	0	0	1.59	14	0	0	-10.1%	3.75
0	YES	14.45	0.44	0	0	0	1.49	12	57184	696	11.6%	5.00
0	YES	6.27	0.05	0	0	0	1.54	130	0	0	-14.6%	4.53
0	YES	15.26	0.10	0	0	0	0.64	111	116476	4785	60.0%	6.10
0	YES	6.82	0.14	0	0	0	1.29	161	0	0	-11.2%	4.92
0	YES	4.44	0.60	0	0	0	1.47	1	0	0	-0.5%	4.58
0	YES	2.50	1.34	0	0	0	0.36	0	0	0	-4.3%	6.98
0	YES	2.15	0.06	0	0	0	0.82	0	1023	33	-11.0%	5.34
0	YES	48.05	1.27	0	57	1	3.75	23	36546	1015	-5.4%	4.24

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	52.36	0.92	0	0	0	3.62	81	972	8	-3.2%	7.65
1	YES	32.67	1.79	0	0	0	3.17	13	170061	2233	-9.2%	4.85
0	YES	30.53	3.36	0	0	0	2.46	92	43167	1046	0.7%	5.52
0	YES	47.41	0.50	0	0	0	1.35	102	0	0	-4.0%	7.06
0	YES	46.52	0.23	0	0	0	5.11	18	89001	1883	0.5%	7.82
1	YES	22.05	0.35	0	0	0	1.57	21	0	0	4.3%	1.99
1	YES	51.00	0.56	0	0	0	5.84	44	201203	2143	-9.5%	3.55
1	YES	60.46	0.26	0	0	0	8.64	93	181991	1983	-7.5%	5.65
0	YES	36.64	0.67	0	0	0	2.55	35	2117	9	-11.1%	6.15
0	YES	51.64	0.01	0	0	0	3.66	61	35344	1507	-7.1%	6.76
0	YES	26.57	0.41	0	0	0	3.69	15	67594	1737	-18.2%	3.40
0	YES	46.14	0.05	0	0	0	2.85	39	118719	2233	-7.8%	9.64
0	YES	26.24	0.26	0	0	0	1.91	30	53956	1078	-8.3%	6.21
0	YES	33.63	0.26	0	0	0	2.53	48	820	2	-7.7%	5.93
1	YES	56.48	0.01	0	0	0	5.75	108	1261	13	-1.0%	5.42
0	YES	46.15	0.10	0	0	0	7.82	101	101064	1053	-4.8%	5.32
1	YES	123.18	0.25	0	0	0	13.10	162	389448	2706	1.7%	7.96
1	YES	54.53	0.04	0	0	0	7.10	23	0	0	-9.6%	3.21
2	YES	62.15	0.22	0	0	0	8.06	30	358	1	-14.3%	2.95
0	YES	56.88	1.57	0	0	0	6.10	115	132	3	-3.3%	5.57
0	YES	12.52	0.01	0	0	0	2.69	63	0	0	-9.1%	5.99
0	YES	18.81	1.09	0	0	0	3.06	31	71373	1484	-7.0%	4.77
0	YES	13.37	0.04	0	0	0	1.07	39	29891	812	-5.9%	3.41
0	YES	12.16	0.19	0	0	0	1.50	38	37179	1245	-2.0%	6.55
0	YES	21.36	0.03	0	0	0	3.15	4	86	1	-6.4%	3.90
0	YES	17.24	0.57	0	0	0	2.99	42	0	0	-9.7%	4.27
0	YES	10.56	0.03	0	0	0	1.31	86	0	0	-5.1%	3.30
0	YES	12.33	0.78	0	0	0	0.62	21	37636	1228	-25.8%	1.70
0	YES	11.20	0.02	0	0	0	1.44	42	30725	1229	-2.7%	5.29
0	YES	14.64	0.09	0	0	0	1.17	11	33943	373	-16.9%	2.89
0	YES	22.54	0.48	0	0	0	2.17	31	0	0	-9.6%	5.10
0	YES	27.07	0.09	0	0	0	3.57	103	68616	1621	-9.6%	5.83
1	YES	42.05	0.13	0	0	0	4.71	30	172515	4381	-7.2%	7.61
0	YES	33.40	0.13	0	0	0	4.85	163	336171	5885	-7.2%	7.04
0	YES	5.88	0.59	0	0	0	2.19	3	0	0	22.7%	5.50
0	YES	4.52	0.55	0	0	0	0.00	0	0	0	-28.3%	1.29
0	YES	36.84	0.77	0	0	0	2.58	3	0	0	1.0%	4.90
0	YES	51.33	2.79	0	0	0	2.25	8	116889	2135	-23.0%	7.50
0	YES	54.77	0.47	0	0	0	6.34	74	83768	2514	33.1%	8.70
0	YES	0.81	0.55	0	0	0	0.00	0	0	0	-24.4%	5.00
0	YES	19.77	0.04	0	0	0	1.37	21	69	1	-12.9%	5.65
0	YES	18.12	0.97	0	0	0	0.94	14	87397	721	-10.3%	3.07

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	7.02	0.17	0	0	0	2.44	28	0	0	1.2%	5.03
0	YES	32.82	1.78	0	0	0	4.31	17	0	0	-4.8%	7.69
0	YES	13.26	0.40	0	0	0	3.17	8	0	0	-3.2%	6.65
0	YES	5.82	0.13	0	0	0	1.69	24	0	0	-3.5%	6.71
0	YES	12.78	0.15	0	0	0	0.93	4	14170	545	-5.0%	6.59
0	YES	30.02	0.27	0	0	0	2.37	14	74131	2792	-13.2%	6.10
0	YES	20.66	0.32	0	0	0	1.42	7	34854	942	-16.0%	4.00
0	YES	23.02	1.04	0	0	0	0.54	1	29592	822	-12.9%	3.31
0	YES	27.14	1.44	0	0	0	0.62	5	31958	1102	3.1%	5.16
0	YES	20.89	0.46	0	0	0	2.28	22	0	0	-7.5%	5.52
0	YES	12.76	1.98	0	0	0	1.19	5	0	0	-6.9%	6.98
0	YES	10.63	1.42	0	0	0	1.19	2	0	0	2.8%	5.45
0	YES	3.44	1.29	0	0	0	0.64	0	0	0	-6.4%	4.61
0	YES	2.38	1.25	0	0	0	0.00	0	0	0	-10.3%	3.73
0	YES	8.74	0.60	0	0	0	1.81	13	24	1	-4.6%	5.62
0	YES	31.64	0.34	0	0	0	1.95	4	94	2	-8.3%	6.45
0	YES	26.95	0.73	0	0	0	2.22	7	0	0	-5.5%	4.89
0	YES	23.15	2.33	0	0	0	0.41	0	0	0	-12.9%	4.85
0	YES	32.03	0.44	0	0	0	2.48	36	56	2	22.3%	5.40
0	YES	39.11	0.55	0	0	0	3.47	39	459	3	-2.6%	7.90
0	YES	18.95	0.10	0	0	0	1.12	33	39682	164	-14.2%	3.71
0	YES	36.09	2.64	0	0	0	0.65	10	0	0	-11.4%	6.79
0	YES	16.65	0.09	0	0	0	2.85	5	0	0	-7.1%	6.58
0	YES	5.02	0.04	0	0	0	1.80	6	12445	274	-6.8%	4.91
1	YES	22.89	1.72	0	0	0	3.00	57	104370	3412	-3.3%	5.67
0	YES	32.58	2.89	0	0	0	1.63	0	0	0	100.0%	3.80
0	YES	60.21	5.77	0	0	0	4.72	3	56208	1171	-12.4%	5.10
0	YES	6.96	0.05	0	0	0	2.05	2	33618	605	-2.4%	1.86
0	YES	50.78	1.08	0	0	0	5.55	3	68759	631	0.2%	2.69
0	YES	12.77	0.06	0	0	0	1.96	70	530	5	-75.8%	2.40
0	YES	14.74	0.65	0	0	0	2.74	69	3396	653	-10.3%	6.39
0	YES	26.65	0.03	0	0	0	2.59	84	98459	2708	-51.2%	4.40
0	YES	23.19	0.13	0	0	0	1.94	114	56015	2473	-9.0%	4.88
0	YES	27.53	0.07	0	0	0	1.31	11	0	0	-3.2%	5.52
0	YES	28.10	0.33	0	0	0	2.21	3	92957	7587	-62.4%	2.50
0	YES	2.37	0.28	0	0	0	0.29	0	0	0	4.1%	2.10
0	YES	20.91	1.02	0	0	0	1.08	20	0	0	1.3%	5.12
0	YES	17.33	0.13	0	0	0	0.90	36	0	0	-1.8%	2.62
0	YES	58.92	6.03	0	0	0	3.49	0	0	0	100.0%	4.90
3	YES	71.36	0.00	0	0	0	28.30	41	23207	317	-38.5%	3.30
0	YES	56.73	0.28	0	0	0	4.86	96	88262	2572	-5.3%	6.39
0	YES	0.06	0.00	0	0	0	0.00	0	41	1	0.0%	0.00

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	20.06	0.03	0	0	0	1.99	39	26487	637	-7.0%	4.09
0	YES	18.34	0.12	0	0	0	2.26	17	0	0	-10.0%	6.87
0	YES	11.33	0.32	0	0	0	2.01	33	3168	96	-10.6%	2.19
0	YES	24.98	0.64	0	0	0	3.08	45	0	0	-8.7%	5.71
0	YES	2.68	1.37	0	0	0	0.31	77	0	0	-13.8%	1.70
0	YES	4.39	1.50	0	0	0	0.96	0	0	0	14.3%	3.90
0	YES	1.33	0.88	0	0	0	0.32	0	0	0	-100.0%	0.00
0	YES	11.61	0.07	0	0	0	2.42	146	69	1	-10.5%	4.79
0	YES	10.28	0.09	0	0	0	2.44	76	0	0	-16.5%	3.60
0	YES	12.79	0.09	0	0	0	3.21	81	234	2	-3.4%	6.75
0	YES	4.86	0.57	0	0	0	1.82	0	14798	151	3.5%	4.21
0	YES	4.76	0.14	0	0	0	0.90	1	936	104	-3.1%	3.55
0	YES	12.68	0.13	0	0	0	2.48	15	0	0	9.2%	9.98
0	YES	5.85	0.86	0	0	0	2.26	16	0	0	-3.9%	4.85
0	YES	15.32	1.37	0	0	0	2.56	21	48152	1754	-5.0%	5.54
0	YES	12.65	0.82	0	0	0	2.61	4	76890	1398	-1.2%	5.22
0	YES	26.53	0.05	0	0	0	5.82	21	0	0	-3.7%	2.68
1	YES	59.93	0.21	0	0	0	6.81	45	140000	1240	-1.3%	7.63
0	YES	36.27	0.37	0	0	0	5.24	102	144512	4340	-89.7%	0.80
0	YES	10.54	1.08	0	0	0	2.53	45	12134	480	18.7%	6.80
0	YES	12.00	0.19	0	0	0	1.75	29	522	3	-5.7%	3.52
0	YES	37.77	0.03	0	0	0	3.58	164	89195	1650	-5.2%	6.60
0	YES	10.92	0.02	0	0	0	2.92	109	690	6	-7.5%	3.53
0	YES	1.62	0.43	0	0	0	0.29	44	0	0	-76.3%	1.76
0	YES	50.62	0.47	0	0	0	2.20	13	0	0	1.2%	5.62
0	YES	42.01	2.22	0	0	0	2.40	0	0	0	100.0%	4.07
0	YES	0.96	0.03	0	0	0	0.22	0	4	1	-95.4%	0.10
0	YES	6.62	0.38	0	0	0	4.18	0	0	0	-54.6%	2.30
0	YES	29.44	0.30	0	0	0	6.01	60	47848	824	-31.0%	5.82
0	YES	15.59	1.04	0	0	0	3.17	20	358	6	-26.6%	4.19
0	YES	36.76	3.49	0	0	0	2.11	7	0	0	68.9%	8.24
0	YES	50.04	4.24	0	0	0	2.33	4	0	0	-9.7%	8.30
0	YES	59.15	6.51	0	0	0	4.56	5	0	0	-8.0%	10.82
0	YES	47.95	4.75	0	0	0	0.00	0	0	0	-9.4%	8.79
0	YES	43.84	3.63	0	0	0	1.86	0	0	0	21.4%	6.40
0	YES	68.72	5.73	0	0	0	2.20	0	0	0	-5.4%	9.87
0	YES	34.75	0.13	0	0	0	4.95	57	47799	1096	-8.6%	5.53
0	YES	35.93	0.62	0	0	0	2.99	10	276	4	16.6%	6.00
0	YES	5.24	0.10	0	0	0	2.03	0	0	0	3.0%	7.39
0	YES	30.96	3.14	0	0	0	1.15	3	0	0	-12.0%	4.36
0	YES	0.76	0.06	0	0	0	0.43	0	0	0	33.3%	2.20
0	YES	5.73	1.79	0	0	0	0.07	0	0	0	5.2%	9.38



(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	11.76	1.77	0	0	0	0.96	6	0	0	-9.5%	7.47
2	YES	25.26	1.46	0	0	0	6.55	18	107130	2335	69.2%	5.90
0	YES	29.95	0.22	0	0	0	3.86	14	480	3	-14.2%	7.12
0	YES	38.21	0.06	0	0	0	2.37	43	43442	1498	-9.1%	7.87
0	YES	43.76	0.20	0	0	0	2.33	16	0	0	-6.9%	7.25
1	YES	31.27	0.64	0	0	0	8.63	41	39477	621	-21.4%	3.30
0	YES	40.40	0.12	0	0	0	4.82	0	0	0	100.0%	5.00
0	YES	54.67	2.78	0	0	0	3.56	0	0	0	100.0%	5.40
0	YES	57.52	0.19	0	0	0	1.99	48	197154	3130	-2.8%	10.50
0	YES	33.56	1.00	0	0	0	2.16	23	166093	1766	-7.7%	8.01
0	YES	19.09	0.91	0	0	0	1.69	25	54726	696	-7.7%	5.93
0	YES	6.40	0.94	0	0	0	0.72	0	0	0	-5.4%	4.93
0	YES	2.09	1.22	0	0	0	0.05	0	0	0	-6.1%	3.27
0	YES	36.03	2.78	0	0	0	1.30	0	0	0	-7.3%	8.01
0	YES	33.75	0.03	0	0	0	3.47	57	57	1	-9.0%	6.47
0	YES	33.65	0.27	0	0	0	4.30	1	36072	216	94.5%	6.80
0	YES	36.01	0.10	0	0	0	4.56	47	60358	928	0.5%	8.43
1	YES	44.19	0.00	0	0	0	6.96	12	126599	1848	-2.8%	1.63
0	YES	1.75	0.00	0	0	0	0.86	0	0	0	-51.0%	0.00
0	YES	4.90	2.40	0	0	0	0.00	0	0	0	-13.2%	7.81
0	YES	2.83	2.13	0	0	0	0.00	0	0	0	-19.7%	6.89
0	YES	12.85	1.21	0	0	0	0.00	0	0	0	-3.5%	5.15
0	YES	38.53	5.20	0	0	0	1.19	13	65265	737	-9.6%	6.29
0	YES	40.64	4.03	0	0	0	2.36	16	0	0	-10.1%	7.41
0	YES	51.05	4.55	0	0	0	3.63	50	40764	836	-2.5%	6.56
0	YES	28.90	4.52	0	0	0	0.26	1	0	0	-6.8%	7.83
0	YES	32.55	2.01	0	0	0	0.47	0	0	0	-8.2%	6.98
0	YES	52.18	4.13	0	0	0	1.14	2	0	0	-9.6%	10.07
0	YES	27.59	3.07	0	0	0	0.00	0	0	0	-14.4%	6.39
0	YES	35.98	4.27	0	0	0	2.22	0	0	0	-3.5%	6.27
0	YES	23.31	3.61	0	0	0	1.21	0	0	0	-12.2%	5.86
0	YES	28.19	1.83	0	0	0	1.16	2	0	0	-6.3%	7.58
0	YES	13.33	1.89	0	0	0	1.09	5	0	0	-8.8%	5.07
0	YES	24.64	3.63	0	0	0	1.89	0	0	0	-20.0%	8.40
0	YES	20.69	4.19	0	0	0	1.67	0	129624	2946	-7.4%	8.33
0	YES	31.51	5.23	0	0	0	0.00	0	0	0	-10.9%	4.37
0	YES	33.22	3.87	0	0	0	0.84	0	0	0	-12.3%	4.93
2	YES	25.56	1.76	0	0	0	4.51	6	0	0	-3.3%	3.96
0	YES	37.64	4.70	0	0	0	0.00	0	0	0	-4.4%	6.29
0	YES	43.88	6.18	0	0	0	0.00	0	0	0	-7.1%	7.76
0	YES	89.93	5.98	0	0	0	1.80	35	631	4	-4.2%	11.63
0	YES	12.57	0.75	0	0	0	1.31	12	0	0	-3.5%	5.14

(N) Number of Automatic Line Sectionalizing Devices on the Feeder	(O) Feeder Looped?	(P) Total Length Of Feeder	(Q) Length of URD Portion Of Feeder Circuit	(R) Number of Customers Served By URD Feeders	(S) CMI for URD Feeders	(T) CI for URD Feeders	(U) Length of Overhead Portion of the Feeder Circuit	Number of Customer s Served by Overhead Feeders	(W) CMI for Overhead Feeders	(X) CI for Overhead Feeders	(Y) % Load Growth Since December 31, 2007	(Z) Recorded Peak Load Recorded through December 31, 2008
0	YES	30.69	0.17	0	0	0	2.46	33	232	4	-2.8%	5.64
0	YES	27.39	0.03	0	0	0	2.93	33	0	0	-7.9%	6.62
0	YES	25.75	0.20	0	0	0	2.98	30	20	1	-8.9%	6.73
0	YES	33.77	0.14	0	0	0	2.87	29	134	2	-9.3%	6.76
0	YES	6.89	1.47	0	0	0	1.64	1	0	0	-8.0%	6.78
0	YES	5.26	0.10	0	0	0	1.72	38	32053	398	-6.5%	3.91
0	YES	4.75	0.41	0	0	0	1.93	10	0	0	5.2%	5.73
0	YES	57.57	2.93	0	0	0	1.61	0	341458	4804	-28.6%	7.00
0	YES	48.36	3.59	0	0	0	1.11	8	70088	1078	-25.6%	6.60
0	YES	73.91	2.81	0	0	0	4.04	15	53108	1207	-8.0%	7.55
0	YES	28.73	2.10	0	0	0	0.22	0	51957	753	56.8%	10.10
0	YES	34.90	3.12	0	0	0	3.34	0	0	0	100.0%	3.60
0	YES	33.10	0.16	0	0	0	3.15	0	2538	6	-24.5%	4.80
0	YES	15.15	1.71	0	0	0	1.78	0	0	0	-48.8%	1.89
0	YES	0.72	0.36	0	0	0	0.00	0	0	0	-3.7%	5.40
0	YES	5.22	0.11	0	0	0	2.11	0	2541	77	-6.6%	2.66
0	YES	9.25	1.45	0	0	0	2.38	1	0	0	-1.5%	7.24
0	YES	4.27	0.55	0	0	0	2.08	0	0	0	14.0%	5.51
0	YES	0.08	0.07	0	0	0	0.00	0	0	0	82.5%	6.40
0	YES	0.16	0.15	0	0	0	0.00	0	0	0	239.3%	6.70
0	YES	0.67	0.02	0	0	0	0.19	0	54	1	193.9%	4.00
0	YES	0.35	0.04	0	0	0	0.20	0	950	5	-83.2%	0.20
0	YES	0.61	0.06	0	0	0	0.54	0	0	0	100.0%	0.12
0	YES	37.72	0.07	0	0	0	5.41	0	30089	746	100.0%	2.70
0	YES	36.54	5.15	0	0	0	2.38	0	0	0	100.0%	3.00
0	YES	22.15	0.65	0	0	0	3.26	0	21722	286	-8.4%	3.50
0	YES	0.40	0.08	0	0	0	0.31	0	34	1	0.0%	0.00
0	YES	15.63	1.18	0	0	0	1.28	0	3996	27	100.0%	0.02
0	YES	0.32	0.00	0	0	0	0.00	5	5590	215	0.0%	0.00
0	YES	0.32	0.09	0	0	0	0.18	0	7420	84	100.0%	1.12
0	YES	0.30	0.00	0	0	0	0.00	14	0	0	0.0%	0.00
0	YES	0.10	0.00	0	0	0	0.00	6	0	0	0.0%	0.00