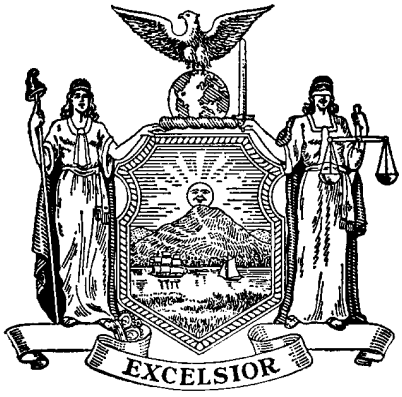
STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2008 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2009

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EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State. As a means of monitoring the levels of service, utilities are required to submit detailed interruption data to the Public Service Commission (Commission). Staff relies on two primary metrics to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] By compiling the results of individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State.

The statewide interruption frequency for 2008, excluding major storms, was considerably better than that recorded in 2007, where all companies except Orange and Rockland Utilities, Inc. (Orange and Rockland) showed improvement. The statewide duration in 2008 was slightly worse than in 2007. The year 2008 was the second-most affected by storms in five years and had 35 more storms than in 2007. Staff attributes some of the 2008 improvement in frequency to the high number of major storms (excludable events). Typical weather patterns result in less severe weather that lead to minor storms, which are included in the measures and thereby increase performance measures. Similar overall patterns exist for frequency and duration when analyzing the reliability data excluding Consolidated Edison Company of New York, Inc (Con Edison) performances.[2]

With respect to individual utilities' performances in 2008, Central Hudson Gas and Electric Corporation (Central Hudson), Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) and Rochester Gas and Electric Corporation (RG&E) performed at, or better than, their historic levels. Infrastructure improvements

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] Con Edison's system includes many large, highly concentrated distribution networks. As a result, its interruption frequency is extremely low as compared to other utilities' interruption frequency and typically skews aggregated data measurements. Therefore, Staff examines statewide statistics both including and excluding Con Edison's data.

associated with National Grid's commitment to invest $1.47 billion over a five year period appears to positively affect its reliability performance.[3] Additionally, Central Hudson's revised tree trimming program seems to be helping in reducing tree caused interruptions. In 2008, Orange and Rockland was not as good as its 2007 performance for both frequency (slight change) and duration. Orange and Rockland attributes its change in duration to the installation of distribution automation; Staff is currently investigating the relationship between distribution automation and duration.

Con Edison performed satisfactorily on its radial system for both frequency and duration, and better than previous year with respect to its network frequency. The Company's performance in 2008 for network duration, however, was significantly worse than its historic performance. Based on a self-assessment conducted in response to Staff's report for 2007Con Edison identified strategies to improve its performance and is implementing several pilot programs this summer. It also formed a task force to continue to identify means to improve performances, especially on it network system. The programs involve predictive outage modeling, improvements to assist in crew allocation and deployment in order to improve both network and radial outage durations. In order to evaluate the effectiveness of Con Edison's actions, Staff is recommending that the Company file a report of the task force findings and results from its pilot programs by September 15, 2009. Staff is also recommending Con Edison perform a self-assessment to identify actions to improve its network duration performance and file the self-assessment with Staff by September 15, 2009.

Although NYSEG's overall reliability statistics improved compared with 2007, its performance with respect to tree related outages continues to decline. In last year's reliability report, Staff recommended NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. The continued decline in performance with respect to tree related interruptions is not surprising because the Company's self-

[3] Case 06-M-0878, Joint Petition of National Grid PLC and KeySpan Corporation for Approval of Stock Acquisition and other Regulatory Authorizations.

assessment showed approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. NYSEG's decision to reduce its tree trimming activities and expenditures despite declining performance in this area needs to be examined in detail and will be the focus of a newly established Case 09-E-0472.[4]

Electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The reliability performance mechanisms are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets.[5] In 2008, Con Edison failed to achieve the duration target in its reliability performance mechanism for the network component of its distribution system and Orange and Rockland failed to achieve the duration target in its reliability performance mechanism for 2008. Combined, these failures resulted in about $5.4 million in negative revenue adjustments.

This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water. Con Edison is expected to comply with the recommendations and submit documentation by the dates indicated in the report.

[4] Case 09-E-0472, In the Matter of Investigation of New York State Electric and Gas Corporation Expenditures Related to its Line Clearance Programs.

[5] NYSEG was the only utility not under an RPM in 2007 and 2008 because its mechanism expired in 2006. A new RPM is in place for the Company's 2009 performance.

INTRODUCTION

The following report is an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service quality, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission about electric service interruptions on a monthly basis.[6] Using the data, Staff calculates two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information provided is also subdivided into 10 categories that reflect the nature of the cause of interruption (cause code).[7] By doing so, analysis of the cause code data can be used to highlight areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, devices could be installed on that circuit to try to minimize the problem. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which allows it to observe trends.

In addition, the Commission adopted standards addressing the reliability of electric service by establishing minimum acceptable levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31st of every year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause codes cover events not typically in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

feeders. There are no revenue adjustments for failure to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report.[9] The service standards were last revised in 2004.

Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more.[10] Major storm interruptions are excluded from the data when calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Performance inclusive of major storms shows the actual customer experience during a year.

[9] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

[10] Major storms do not include heat-related service interruptions.

2008 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities. Each year, Staff also prepares an Interruption Report summarizing the monthly interruption data submitted by the utilities. The 2008 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2008 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2008 and indicates company-specific trends where applicable.

In addition, performances are compared to utilities' reliability performance mechanisms (RPMs) placed into effect as part of their rate orders. The reliability performance mechanisms are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The targets are based on the indices used by the Commission's electric service standards.

Con Edison and Orange and Rockland each failed to achieve a target in their reliability performance mechanisms for 2008. Con Edison failed to achieve the duration target for its network system, resulting in a potential negative rate adjustment of $5 million.[11] Orange and Rockland failed to achieve its duration target, which results in a negative revenue adjustment of approximately $400,000.

STATEWIDE

For many years, Staff has been combining the individual utility performances into overall statewide statistics. By doing so, we evaluate the level of reliability provided and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks, its interruption frequency is

[11] This rate adjustment is a preliminary assessment based on Con Edison's March 31, 2009 filing that detailed the Company's compliance with its RPM. Con Edison's rate adjustment has not been presented to the Commission for final action.

extremely low as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, we examine and present aggregated data including and excluding Con Edison's data.

Statewide, the frequency of interruptions when excluding major storms was 0.56 in 2008, which is considerably better than the five-year average of 0.63 and better than 2007's performance level of 0.65. All companies, except Orange and Rockland, had fewer customers affected by power outages, again when major storms are excluded, as shown in Figure 1. This improvement is amplified when Con Edison is excluded with the frequency performance for 2008 at 0.88, which is considerably better than the five-year average of 0.98.

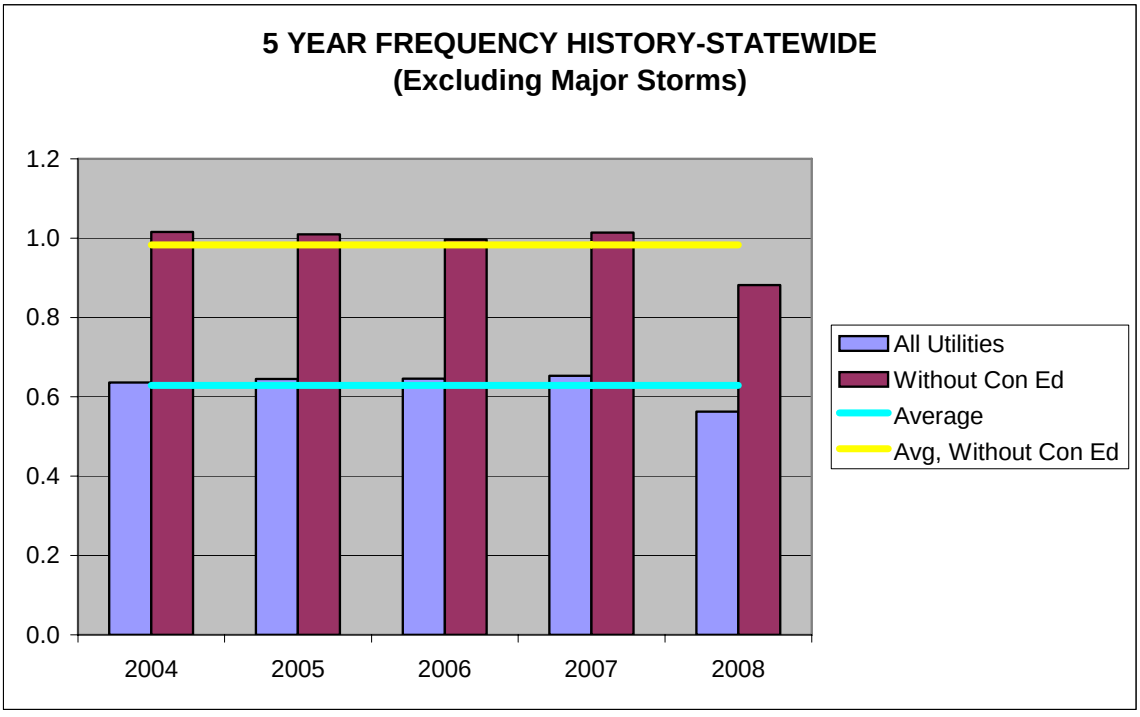

Figure 1: Statewide Frequency Performance

Figure 2 shows the statewide duration index for 2008, excluding major storms. The overall statewide duration index continues to be at a more normal level of 1.93 hours, as compared with 1.95 hours and 1.89 hours in 2005 and 2007, respectively. Con Edison's Long Island City network outages greatly affected the statewide duration in 2006. The statewide duration index, excluding Con Edison, was 1.89 hours in 2008, which is slightly better than 2007 and equal to the five-year average.

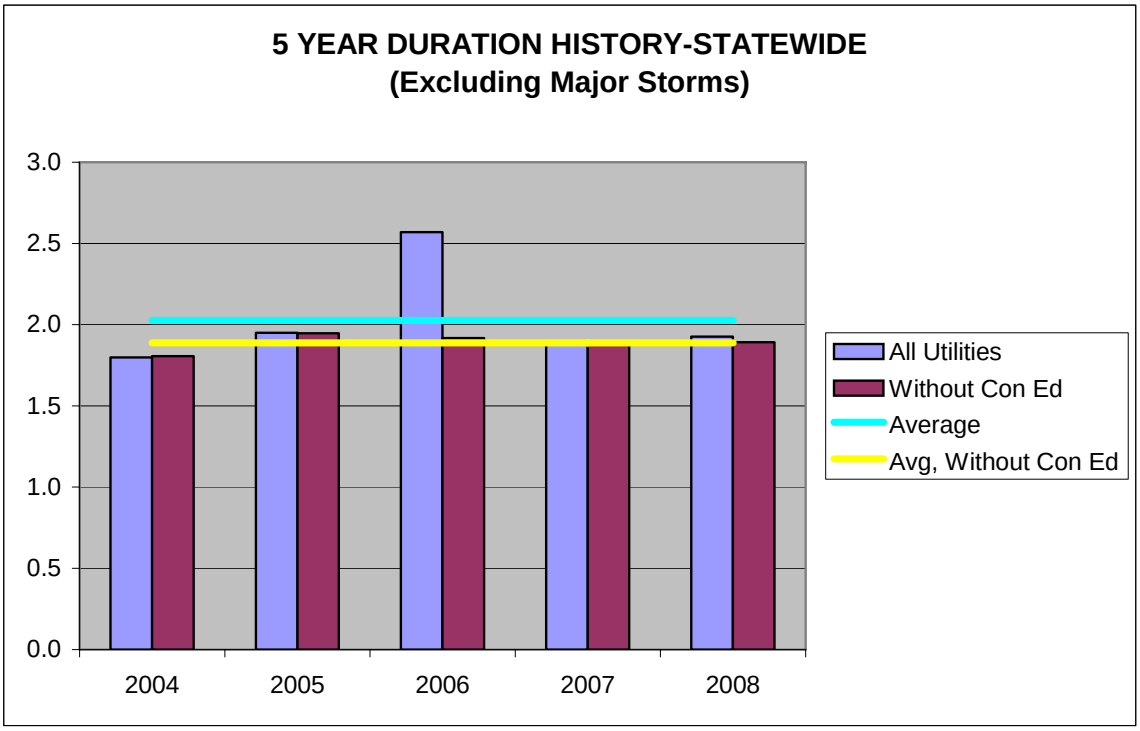

Figure 2: Statewide Duration Performance

In 2008, the weather during the winter and summer months was relatively severe, while there was a moderate amount of adverse weather activities in the spring. This pattern was apparent as numerous winter storms occurred during the early part of the year, culminating in a severe ice storm which significantly affected the Capital Region and Mid-Hudson in December 2008. Several fronts that traversed the State in June and July brought severe storms and/or damaging winds. In general, wind speeds and gusts were higher in 2008 than in prior years; National Grid reported the number of days with winds exceeding 30 miles per hour was 20% higher than the annual norm, and nearly twice the norm in two of its service areas. As a result, the total number of major

storms experienced by utilities increased by 35 storms over last year (Table 1, below). National Grid and NYSEG each experienced more than 20 major storms in 2008.

Table 1: Major Storms in 2008

Company	2007	2008	Change in Major Storms
Con Edison	4	4	0
National Grid	10	24	+14
NYSEG	17	25	+8
RG&E	10	12	+2
Central Hudson	5	9	+4
Orange and Rockland	1	8	+7
Total	**47**	**82**	**+35**

The year 2008 was the second-worst year for severe weather effects in the last five years (Figure 3, below).[12] When including major storms, the 2008 statewide frequency and duration performances were 0.93 and 4.50, respectively. When excluding Con Edison, the 2008 statewide frequency and duration performances including major storms were 1.51 and 4.62, respectively. All four of these measures were worse than the five-year averages. Major storms in 2008 accounted for 71% of the overall customer-hours of interruptions and 39% of the overall number of customers affected.

[12] The Buffalo area experienced a massive ice storm in 2006.

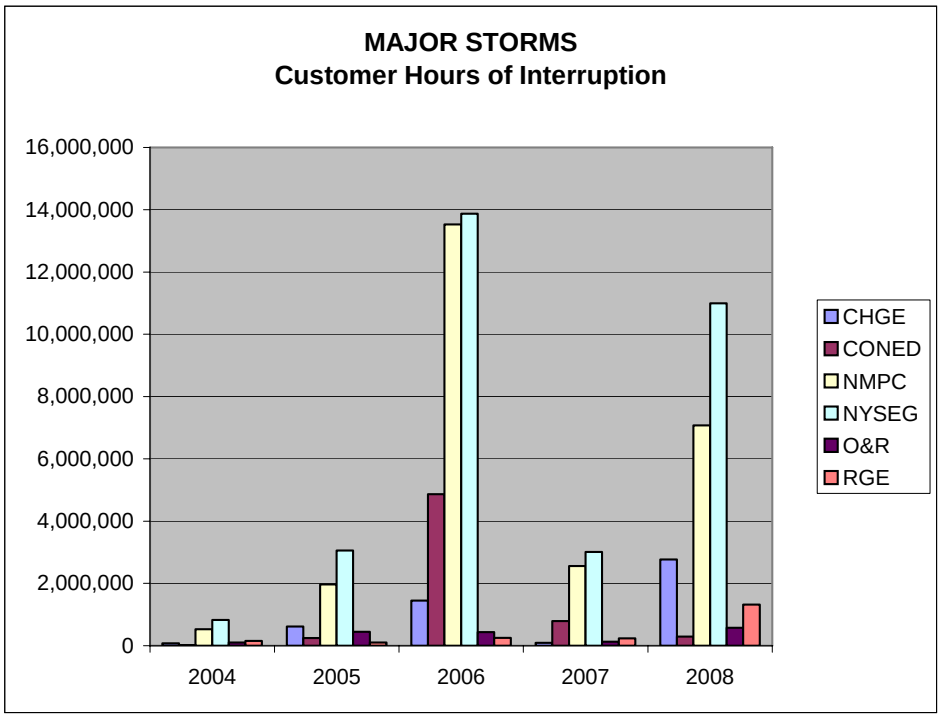

Figure 3: Major Storm Customer Hours

New York State investor-owned electric utilities must submit a report to the Commission addressing all facets of their restoration effort if the restoration period associated with significant storms lasts more than three days.[13] Overall, the utilities responded well to the major storms in 2008, restoring most customers affected within 24-72 hours from the end of a storm. In 2008, there were four reports submitted on major storms as listed in Table 2, below. These storms, especially the December ice storm, as well as the numerous other major storms mentioned earlier, had a greater than historic effect on the total number of hours that customers were without service.

Table 2: Storm reports filed in 2008

Date	Company	Areas Affected	Reason for Interruptions
October	NYSEG	Oneonta, Liberty	Wind and Snow Storm
December	Central Hudson, NYSEG, GRID	Capital District & Troy area	Ice Storm

CON EDISON

[13] 16 NYCRR Part 97, Part 105.4

Table 3: Con Edison's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Network Systems						
Frequency (SAIFI)	0.005	0.006	**0.021**	**0.075**	0.017	0.025
Duration (CAIDI)	3.64	**4.44**	**60.81**	1.79	**6.28**	15.39
Radial System						
Frequency (SAIFI)	0.39	0.51	**0.54**	0.38	0.42	0.45
Duration (CAIDI)	1.64	**1.91**	**2.66**	**2.07**	1.83	2.02

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Con Edison serves approximately 3.2 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

In 2008, the network frequency performances were significantly lower than its historical performances in 2006 and 2007. The Company radial frequency was slightly higher than in 2007 but lower than the five year average. In 2008, the Con Edison spent $562 million to improve the reliability on its electric system including $352 million on relief programs, $122 million on reliability programs, and $88 million on maintenance programs. In 2007 and 2008, the Company expanded its tree trimming budget and has seen a reduction in the number of interruption caused by trees as compared with previous years.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design criteria and underground settings, the majority of interruptions (85%) are associated with the service portion of the network system, as shown in Figure 4. Equipment failures are the second highest (7%) cause for interruptions in 2008. Failures on parts of the network grid itself (secondary feeders or mains) are the third highest cause for interruptions at 6%.

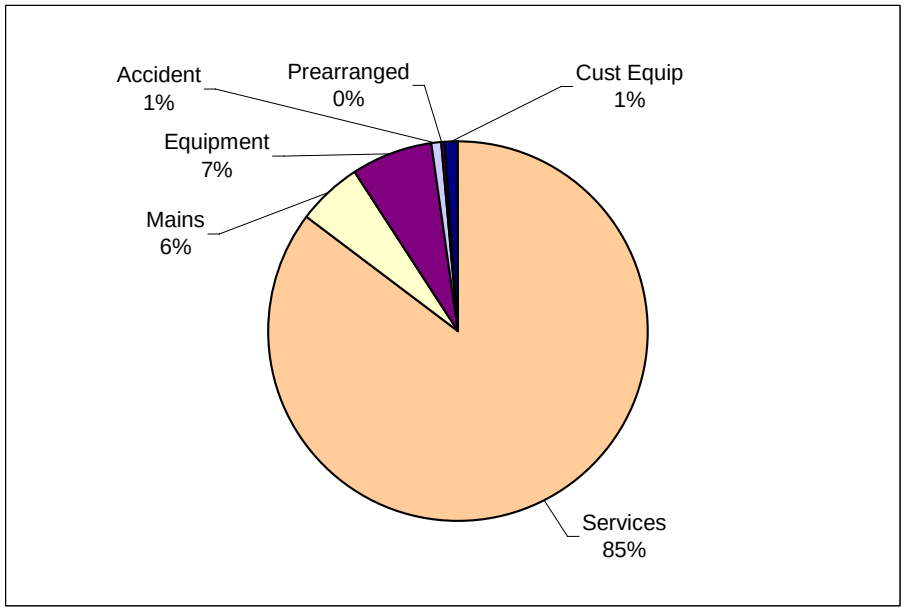

Figure 4: Con Edison's 2008 Network Interruptions by Cause

On its radial system, Con Edison's performance in 2008 was better than the five year average for both frequency and duration. Equipment failures are responsible for 71% of the interruptions on the radial system, followed by trees and accidents at 14% and 8%, respectively, as shown in Figure 5.

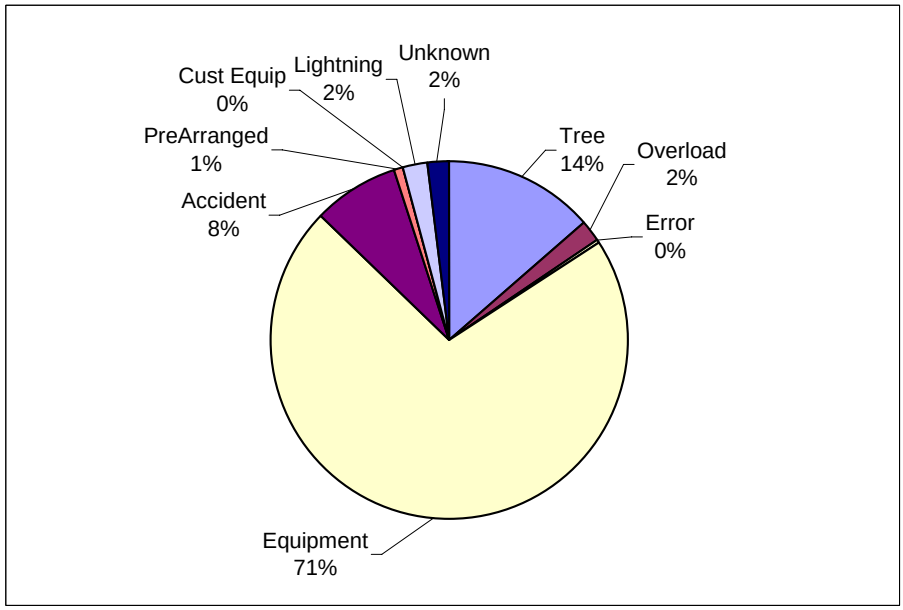

Figure 5: Con Edison's 2008 Radial Interruptions by Cause

Con Edison had one of its worst years for network duration in 2008. In recent years, Con Edison has missed its duration targets for both network and non-network.[14] As part of last year's report, Staff recommended that the Company conduct a detailed self assessment into why its duration performance associated with its radial systems had deteriorated. Con Edison responded by noting that nearly 40% of it longer duration outages are associated with weather events that typically occur in the late afternoon and early evening. As a result, the Company has initiated a study to correlate weather patterns to high duration events. Based on the results of the study, the Company expects to be able to better predict events and ensure sufficient staffing levels are on duty. For 2009, the Con Edison has established a program to experiment with length of shifts (8-hr vs. 12-hr) to determine which provides better coverage, and will be implementing an automated call system to improve crew response times. The Company is also considering dedicated crews to respond to specific outages and using electricians as first responders. In 2008, Con Edison established a new workplace in Westchester County to reduce travel time in that area.

Finally, Con Edison has recently assembled a task force to identify strategies to help improve its network and radial duration performances. Staff will be meeting with the task force in June to review new proposed actions. We are encouraged by the pilot programs and would like to see successful programs applied on a company-wide basis. Therefore, Staff recommends that Con Edison file a report by September 15, 2009 detailing information learned by the task force and during pilot programs. The report should include information on how Con Edison will implement successful programs on a permanent basis. Additionally, Staff recommends that Con Edison perform a self-assessment to identify strategies to improve its network performance and identify corrective actions that are unique to its network system. The self assessment should also be filed by September 15, 2009.

[14] In 2007, a short duration incident affecting a large number of customers resulted in a network duration

NATIONAL GRID

Table 4: National Grid's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.02**	**0.98**	**1.01**	**0.96**	0.75	0.94
Duration (CAIDI)	2.04	**2.32**	2.05	2.01	1.96	2.08

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's territories include metropolitan areas such as the cities of Buffalo, Albany, and Syracuse. National Grid also serves many rural areas in northern New York and the Adirondacks.

Overall, National Grid improved in 2008 and achieved all of its reliability targets. Previously, National Grid missed the frequency target level of 0.93 for each year from 2004 until 2007. Results this year, however, significantly improved and the Company met the target with an end result of 0.75. Duration results were better in 2008 as well; the Company has performed better than the duration target for three consecutive years now. In general, the utility had improved service on a region by region basis.

The overall reliability improvements are partially due to the installation of 432 reclosers, of which most were identified and installed through the Engineering Reliability Review (ERR) process since 2006. The Company installed 234 out of the 432 reclosers during the calendar year of 2008. Results for both the frequency and duration categories were unusually low, due in part to the numerous interruptions resulting from major storms in 2008. Although the Company exhibited a significant reliability improvement through various efforts, it is not likely that results of this magnitude will continue in the future. Staff will encourage the utility to continue with efforts in order to sustain a reasonable level of reliability.

As a result of past reliability results, the Commission placed additional emphasis on National Grid's reliability performance in association with its acquisition of Keyspan, which provides electric distribution services to the Long Island Power

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that was well below historic performances.

Authority. Because of this acquisition, the Commission created an Order requiring the utility to file details of its capital expenditure spending. Staff actively reviews listed projects within this filing. Additionally, Staff provides input and recommendations on the justification and progress of the projects.

As seen in Figure 6, equipment failures are the leading cause of interruptions for National Grid, however, this has been improving over the past five years. The five year average number of interruptions in this category is approximately 4,000; yet this year, the utility reported around 3,500 such occurrences. Furthermore, results showed that the utility reduced the number of customers affected and customer hours for this cause code by almost one half compared to 2007. As evident in the equipment failure cause code results from 2008, the above noted programs appear to be useful methods for improving National Grid's reliability performance in association with equipment failures.

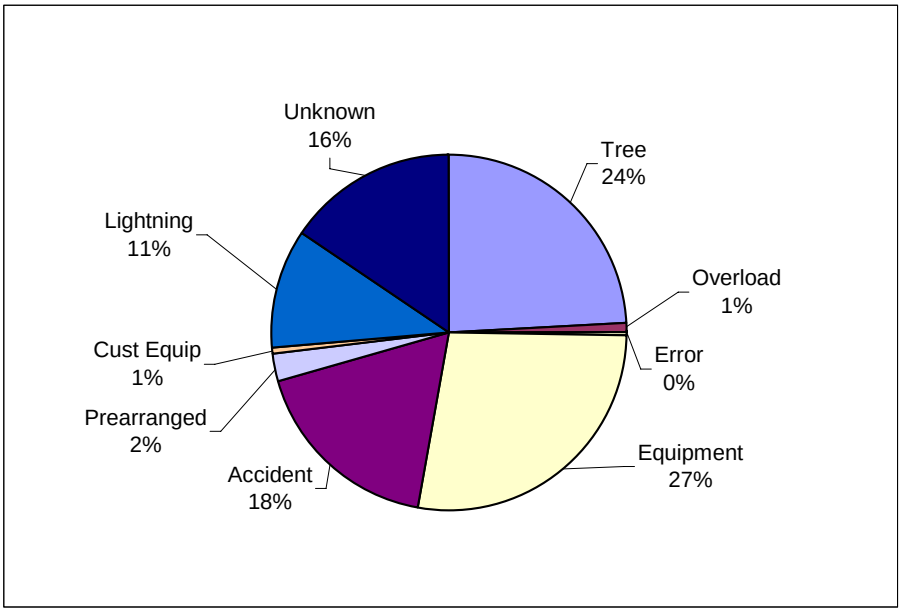


Figure 6: National Grid's 2008 Interruptions by Cause

National Grid made a commitment to spend $1.47 billion on capital improvements to its transmission and distribution system over a five year period from 2007 until 2011. The five-year investment plan contains proposed projects and strategies

to upgrade and replace components on its electric system. In particular, the utility developed a Reliability Enhancement Plan (REP) to improve its performance by focused maintenance work on poor performing circuits and replacement of aging assets. This plan specifically includes a targeted program to enhance the performance of feeders, asset replacement, an improved inspection and maintenance program, and a tree trimming program. The REP also provides for the installation of sectionalizing equipment and animal guards that will help to minimize the number of customers affected when an outage occurs, or to avoid interruptions in general. In conjunction with other programs, National Grid has replaced 665 transformers which were deteriorated or overloaded. As noted above, the Company identified and installed 432 reclosers since 2006. Many of the deteriorated assets addressed by the REP were identified as a result of the utility's inspection program.

The second highest contributor to National Grid's interruption performance for 2008 was tree-related outages; however, the Company showed signs of improvement as compared with last year's results in this area as well. Although the number of interruptions in 2008 for this cause code was fairly close to results of 2007, the number of customers affected and customer hours were reduced from last year by approximately 15%. Prior performance had prompted the utility to shorten its trimming cycle from six years to a more traditional five year period in urban areas. National Grid has also expanded its program to remove "danger" trees outside of the standard clearance zone. With these amplified activities, the utility has gradually increased its spending on distribution tree trimming in recent years. National Grid spent approximately $33 million for distribution trimming during fiscal year 2008. The drop in tree-related interruptions in 2008 was mainly due to a reduced number of interruptions related to fallen trees. Outages caused by broken limbs and tree growth actually increased as compared with last years results. Furthermore, the majority of improvements within this cause code occurred in the Syracuse and Buffalo areas. Tree-related frequency results were actually up in five of National Grid's eight operating divisions.

The number of accident caused interruptions in 2008 as compared with 2007decreased by approximately 20% and yielded a reduction of approximate 25% for both customers affected and customer duration. The number of unknown causes of interruptions in 2008 was fairly equivalent to those of 2007, however, the number of customer affected and customer duration were higher than the 2007 results. The number of 2008 lightning caused interruptions was also close to those of 2007, but the customer affected and customer duration decreased by approximately one half compared to the previous results.

National Grid's capital investment program is having a positive affect. National Grid should continue to pursue infrastructure investments that relate reliability. As part of Case 06-M-0878, Staff will continue to closely monitor the Company's capital improvements.

NEW YORK STATE ELECTRIC AND GAS

Table 5: NYSEG's Historic Performance Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13
Duration (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05

Approximately 840,000 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

The year 2008 showed improvement over last year's poor reliability performance by the Company. NYSEG's 2008 frequency performance of 1.11 was better than both the previous year's performance and its five year average performance level. The 2008 duration performance of 2.08 was also better than both the previous year's performance, however, still slightly higher than the five year average. The two major

contributors to NYSEG's interruptions were tree contacts (41%) and equipment failures (21%), as shown in Figure 7.

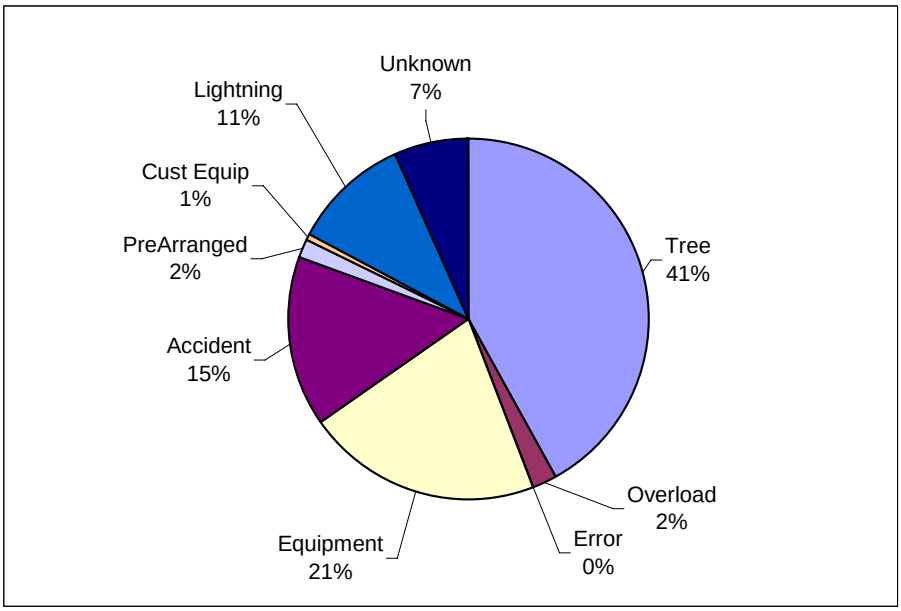


Figure 7: NYSEG's 2008 Interruptions by Cause

Tree related interruptions have consistently had the greatest impact on NYSEG's interruption performance. As shown in Table 6 below, NYSEG's performance has continuously declined with respect to tree caused interruptions. In last year's reliability report, Staff recommended that NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. On January 7, 2009, NYSEG responded to Staff's recommendation stating that increased costs for tree trimming efforts per mile have reduced the number of overall miles completed each year. The report showed

Table 6: NYSEG's Reliability Performance with respect to Tree Caused Interruptions

Year	Customers Affected by Tree Interruptions	Customer Hours for Tree Interruptions	Number of Interruptions due to Trees
2004	205,245	477,623	3,002
2005	288,347	666,940	4,090
2006	297,893	735,250	3,779
2007	333,469	865,694	3,997
2008	349,065	886,543	4,215

approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. The number of customers affected by tree events has increased by 32% compared to the average for the years 2002 through 2005.

In Case 05-E-1222, NYSEG was allowed $17.7 million in rates for tree trimming on an annual basis effective in 2007. The Company indicated, however, that it has spent less in tree trimming on its distribution system than what was allowed in rates.

NYSEG's existing tree trimming program requires cycle trimming on all of the 35 kV circuits, but only the three phase sections of its 12 kV and 5 kV circuits, and single phase sections of these circuits on an ad hoc basis. The Company recommended in its self-assessment that in order to reduce tree caused interruptions, the existing tree trimming program should be expanded to perform cycle trimming on all single phase portions of its circuits. Given that NYSEG has not completed its planned trimming in recent years, Staff has concerns about NYSEG's tree trimming program.

Even though both frequency and duration improved in 2008 as compared with 2007, Staff continues to be concerned with NYSEG's overall approach to managing its tree caused interruptions. NYSEG's decision to reduce its tree trimming activities despite declining performance in this area needs to be examined. As a result, Staff will be seeking detailed information and explanations of trimming activities performed, spending variances, and quality assurance as part of the newly established Case 09-E-0472.

Equipment failures are the second highest cause of interruptions. In the Iberdrola merger (Case 07-M-0906), NYSEG was required to submit a condition assessment report. This report was received by Staff on December 8, 2008, and provided information on all of the electrical equipment and assets within its service territory and identified how age is a continued concern on the entire electrical system. The report concluded that NYSEG's electrical system is in "sound" condition. Over the past five years, however, NYSEG's reliability data show a steady increase in the number of interruptions caused by the failure or poor performance of the system equipment.

To proactively address the Company's aging infrastructure and equipment failure issues, NYSEG started a Transmission and Distribution Infrastructure Replacement Program (TDIRP). This program has been in place since 2005 and is the principal funding source for projects that address overall system condition issues. Overall Staff views this program as beneficial; however, funding for the program has been on the decline, and Staff is concerned whether NYSEG is committing appropriate funding resources to making the necessary infrastructure investments through TDIRP.

Another concern noted in Staff's reliability report last year was a declining trend in field staffing/personnel levels. As required, NYSEG provided its self-assessment that stated cost pressures have diminished its ability to increase or even maintain the field personnel levels once held in previous years. The Company goes on to say that while it continues to maintain sufficient numbers of workers to achieve the established reliability performance targets, increasing the number of qualified field personnel by approximately 10% may support improved duration numbers. As shown in Table 7 below, NYSEG has increased in total field personnel number for 2008. The increases, however, are for apprentice workers and not the qualified workers the Company is seeking.[15]

Table 7: NYSEG's Field Personnel Information

	2004	2005	2006	2007	2008
Total Number of Field Personnel	646	651	619	608	662
Percent Change from Previous Year	----	+0.8%	-4.9%	-1.8%	+8.2%

ROCHESTER GAS AND ELECTRIC

Table 8: RG&E's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81
Duration (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81

[15] It takes approximately 3 years for an apprentice to be considered a qualified worker.

RG&E serves approximately 360,000 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better performing utilities within the state. The Company has not failed its RPM targets of 0.90 for frequency and 1.90 for duration as established in its rate orders. As shown in Table 8, above, RG&E's performance for frequency and duration continue to be fairly consistent with its five year average. In 2008, the Company's frequency performance of 0.78 is the lowest since 2004. RG&E's duration performance of 1.85 in 2008 was slightly higher than both the previous year's performance. Figure 8 shows that the two major contributors to interruptions continue to be equipment failures (31%) and tree contacts (21%). The levels are slightly higher than the five year averages of both equipment failures and tree contacts.

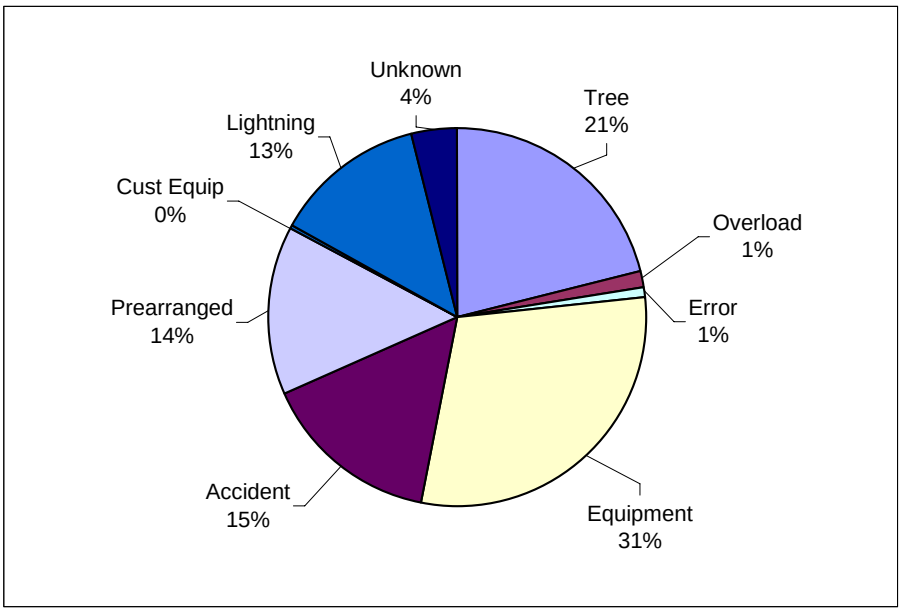


Figure 8: RG&E's 2008 Interruptions by Cause

Like NYSEG, RG&E was required to submit a conditions assessment report as part of the Iberdrola merger agreement. This report was received by Staff on December 8, 2008, and concluded that RGE's electrical system is in "sound" condition. Equipment failures, however, continues to be RG&E's highest contributor to its interruption performance. In 2007, RG&E implemented its own Transmission and Distribution Infrastructure Replacement Program (TDIRP), similar to that used by NYSEG, to address the Company's aging infrastructure and equipment failure issues. Staff encourages RG&E to make necessary infrastructure investments through TDIRP to ensure safe and reliable service to its customers.

CENTRAL HUDSON GAS AND ELECTRIC

Table 9: Central Hudson's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.36**	1.44	**1.59**	1.42	1.27	1.42
Duration (CAIDI)	**2.35**	2.70	**2.58**	2.43	2.47	2.51

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh. Central Hudson's RPM targets were reestablished at 1.45 for frequency and 2.50 for duration in its most recent rate order, effective in 2007.[16]

Central Hudson' frequency performance of 1.27 in 2008 was its best in five years, considerably better than its five-year average (Table 9, above). The 2008 duration performance of 2.47 was better than the five-year average, but still close to the RPM target of 2.50, however. Figure 9 shows that 37% of customer interruptions are due to tree related issues, followed by accidents at 22%.

[16] As part of the joint agreement adopted in the last rate order, Central Hudson was not assessed revenue adjustments for 2005 performances.

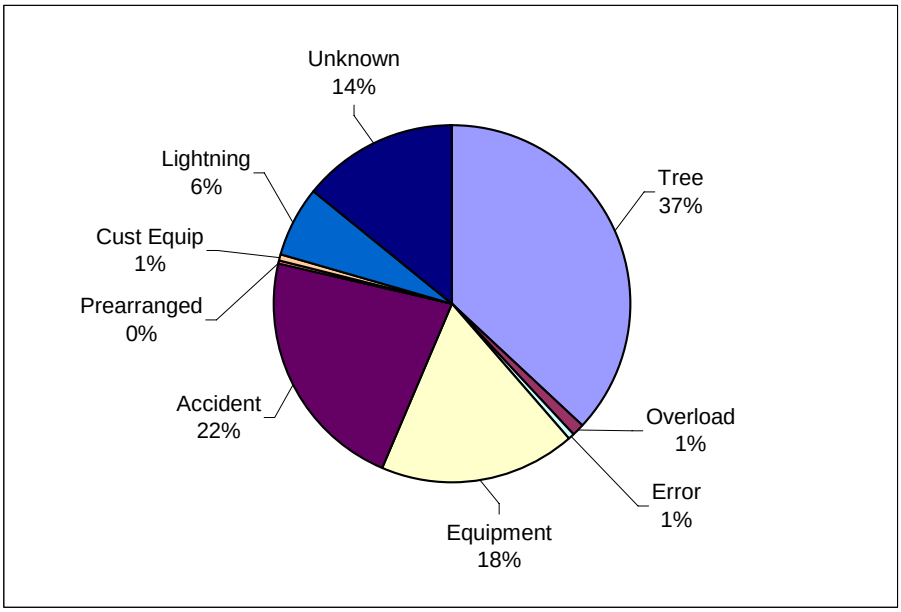


Figure 9: Central Hudson's 2008 Interruptions by Cause

Central Hudson has had a reduction in equipment failures resulting in customer outages since 2005 (see Table 10 below); in 2008, equipment failures were responsible for only 18% of the interruptions.

Table 10: Customers Affected by Service Interruptions

Year	Tree	Equipment
2004	136,933	89,177
2005	155,504	109,190
2006	172,850	104,263
2007	156,053	99,290
2008	137,170	86,115

In last year's report Staff directed that Central Hudson perform a self assessment of its line clearance program. Staff reviewed Central Hudson's report and found it satisfactory. It does appear that Central Hudson has been addressing tree caused interruptions in a logical way, expanding lessons learned in its enhanced clearance program to the rest of the system and positive results might have begun to be seen (see Table 10, above). In its current rate case proceeding, based on the recommendation of its

consultant and actual experience, Central Hudson proposed (and Staff supported) expanding its enhanced tree trimming program of critical three-phase lines as well as the implementation of the modified enhanced program for the rest of the system, both single and multi-phase. A possible encouraging trend in reduced tree outages may also be seen in Table 9 (above) and will be something we will monitor.

Central Hudson's annual reliability report indicates one driver of outage duration is overloaded distribution transformers. Several districts noted they are replacing transformers before they fail using a combination of Transformer Load Management database and field checks with line foremen. This approach appears to have merit especially as preparation for warmer summers, such as was experienced in 2008.

ORANGE AND ROCKLAND

Table 11: O&R's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22
Duration (CAIDI)	**1.61**	**1.71**	1.51	1.60	**1.83**	1.65

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland is the smallest of the major investor-owned electric utilities. It serves approximately 217,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2008, the Company met its reliability performance mechanism target for frequency. The 2008 frequency performance, although higher than 2007, was still below the Company's five year average performance level. Orange and Rockland, however, failed its reliability performance mechanism for duration in 2008 with a performance of 1.83.

As shown in Figure 10 (below), equipment failures (34%) and trees (31%) caused the majority of interruptions in 2008. Orange and Rockland is addressing reliability issues due to equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable Maintenance and

Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

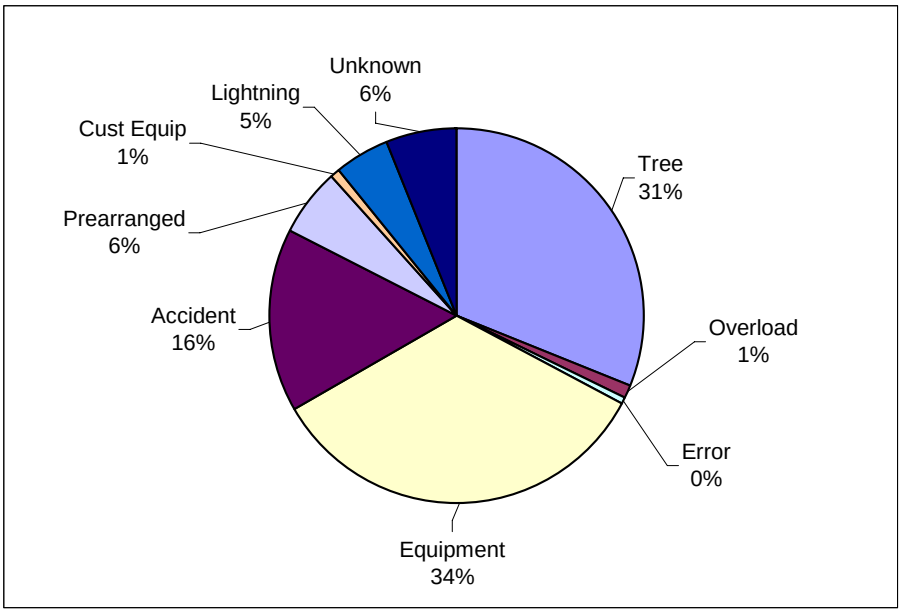


Figure 10: Orange and Rockland's 2008 Interruptions by Cause

The Company is addressing the tree concerns through increased efforts on its trimming programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify additional efforts to address key areas with recurring outages such as a recurring outage identification program and a "cycle buster" trimming program. These programs should help reduce the impact of tree contacts on the Company's electrical system through the coming years.

Orange and Rockland's duration performance in 2008 was slightly above its RPM target of 1.70. The Company had performed better than this target in both 2006 and 2007. Since its last rate filing (Case 07-0949), Orange and Rockland has been expressing concern that distribution automation equipment is negatively impacting its duration performance and recently made a presentation to Staff on the issue. As a result, Staff is working closely with the Company to determine the identifiable affects distribution automation has on the duration measure.

Staff believes that Orange and Rockland is appropriately installing more distribution automation equipment, increasing tree trimming efforts, and performing needed capital improvement projects to improve overall reliability. Equipment Failures and Tree Contacts continue to be the major causes of interruptions throughout the past five-years and this performance trend remains consistent throughout each operating division as well. Orange and Rockland's has been striving to control tree and equipment related interruptions for several years now. Even though immediate drastic changes are not anticipated due to the nature of the causes, small and steady improvements are expected in the years to come with the finalization of additional reliability projects.

RECOMMENDATIONS

The following is a summary of Staff recommendations based on our analysis of reliability performances in 2008. Additionally, NYSEG will have to respond to actions taken as part of Case 04-E-0472.

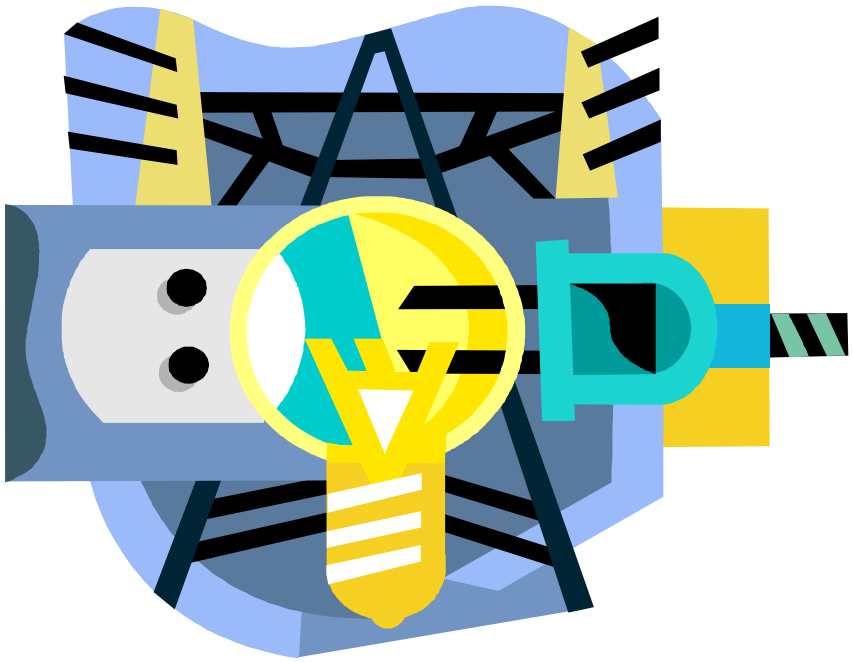
1. Con Edison should file a report no later than September 15, 2009 detailing information learned during pilot programs related to improving its duration performance and explaining how successful programs from the pilot programs would be implemented on a permanent basis.

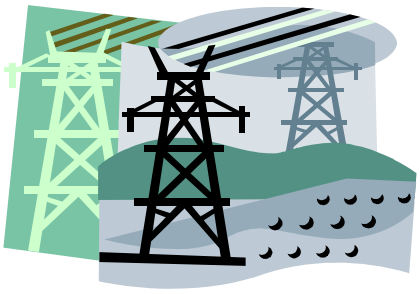
2. Con Edison should perform a self-assessment to identify strategies to improve its network duration performance and identify corrective actions that are unique to its network system. The self assessment should be filed no later than September 15, 2009.

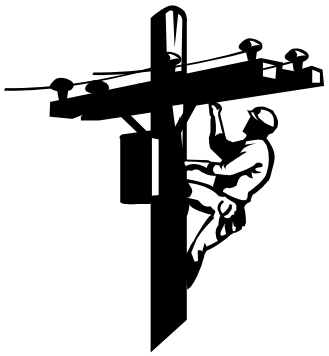
APPENDIX

2008 INTERRUPTON REPORT

The 2008 Interruption Report







Office of Electricity Gas and Water

June, 2009

ATTACHMENT
Definitions and Explanations of Terms Used in the 2008
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2008**, customers served is the number of customers as of 12/31/2008. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2007.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.36	1.44	1.59	1.42	1.27	1.42
DURATION	2.35	2.70	2.58	2.43	2.47	2.51
CONED						
FREQUENCY	0.11	0.14	0.16	0.16	0.13	0.14
DURATION	1.71	1.99	8.23	1.97	2.27	3.23
LIPA *						
FREQUENCY	0.83	0.85	0.75	0.90	0.77	0.82
DURATION	1.04	1.07	1.37	1.20	1.36	1.21
NAT GRID						
FREQUENCY	1.02	0.98	1.01	0.96	0.75	0.94
DURATION	2.04	2.32	2.05	2.01	1.96	2.08
NYSEG						
FREQUENCY	1.13	1.12	1.12	1.20	1.11	1.13
DURATION	1.96	1.96	2.01	2.22	2.08	2.05
O&R						
FREQUENCY	1.30	1.36	1.23	1.03	1.19	1.22
DURATION	1.61	1.71	1.51	1.60	1.83	1.65
RG&E						
FREQUENCY	0.86	0.79	0.79	0.83	0.78	0.81
DURATION	1.84	1.87	1.78	1.73	1.85	1.81
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.02	1.01	1.00	1.01	0.88	0.98
DURATION	1.81	1.95	1.92	1.88	1.89	1.89
STATEWIDE (WITH CONED)						
FREQUENCY	0.64	0.65	0.65	0.65	0.56	0.63
DURATION	1.80	1.95	2.57	1.89	1.93	2.03

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.42	1.83	2.20	1.51	2.15	1.82
DURATION	2.45	3.27	4.12	2.51	5.76	3.62
CONED						
FREQUENCY	0.11	0.15	0.23	0.18	0.14	0.16
DURATION	1.74	2.32	12.31	3.12	2.71	4.44
LIPA *						
FREQUENCY	0.91	1.07	1.17	1.03	1.09	1.05
DURATION	1.12	1.42	1.99	1.37	1.65	1.51
NAT GRID						
FREQUENCY	1.12	1.28	1.48	1.31	1.37	1.31
DURATION	2.15	2.76	7.18	2.70	4.32	3.82
NYSEG						
FREQUENCY	1.41	1.77	1.79	1.71	2.14	1.76
DURATION	2.26	3.27	10.32	3.62	7.07	5.31
O&R						
FREQUENCY	1.46	1.83	1.81	1.17	1.64	1.58
DURATION	1.77	2.42	2.15	1.92	2.94	2.24
RG&E						
FREQUENCY	0.98	0.93	0.98	1.16	1.36	1.08
DURATION	2.04	1.90	2.14	1.80	3.77	2.33
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.15	1.36	1.48	1.31	1.51	1.36
DURATION	1.97	2.60	6.02	2.56	4.62	3.55
STATEWIDE (WITH CONED)						
FREQUENCY	0.71	0.85	0.96	0.83	0.93	0.86
DURATION	1.95	2.58	6.65	2.61	4.50	3.66

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	50,242	54,434	55,211	55,425	53,758	53,814
Number of Customer-Hours	8,015,041	8,631,869	8,439,916	8,439,464	7,399,179	8,185,094
Number of Customers Affected	4,439,677	4,433,386	4,400,072	4,495,428	3,910,426	4,335,798
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.81	1.95	1.92	1.88	1.89	1.89
Average Duration Per Customers Served	1.83	1.97	1.91	1.90	1.67	1.86
Interruptions Per 1000 Customers Served	11.49	12.39	12.51	12.50	12.12	12.20
Number of Customers Affected Per Customer Served (SAIFI)	1.02	1.01	1.00	1.01	0.88	0.98

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	59,458	65,019	65,752	66,746	65,403	64,476
Number of Customer-Hours	8,596,012	9,506,355	12,603,322	9,429,452	8,326,562	9,692,341
Number of Customers Affected	4,779,817	4,873,534	4,905,844	4,996,967	4,319,550	4,775,142
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.80	1.95	2.57	1.89	1.93	2.03
Average Duration Per Customers Served	1.14	1.26	1.66	1.23	1.08	1.28
Interruptions Per 1000 Customers Served	7.91	8.61	8.65	8.72	8.51	8.48
Number of Customers Affected Per Customer Served (SAIFI)	0.64	0.65	0.65	0.65	0.56	0.63

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	53,535	66,767	70,872	61,753	73,150	65,215
Number of Customer-Hours	9,852,887	15,493,419	39,413,242	14,848,512	30,962,269	22,114,066
Number of Customers Affected	5,009,438	5,960,730	6,548,910	5,808,516	6,705,414	6,006,602
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.97	2.60	6.02	2.56	4.62	3.55
Average Duration Per Customers Served	2.25	3.53	8.93	3.35	6.98	5.01
Interruptions Per 1000 Customers Served	12.24	15.20	16.05	13.93	16.49	14.78
Number of Customers Affected Per Customer Served (SAIFI)	1.15	1.36	1.48	1.31	1.51	1.36

STATEWIDE (WITH CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	62,806	77,937	86,734	74,261	85,548	77,457
Number of Customer-Hours	10,454,054	16,612,929	48,437,221	16,630,252	32,188,186	24,864,528
Number of Customers Affected	5,355,101	6,442,863	7,282,114	6,379,276	7,158,329	6,523,537
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.95	2.58	6.65	2.61	4.50	3.66
Average Duration Per Customers Served	1.39	2.20	6.37	2.17	4.19	3.27
Interruptions Per 1000 Customers Served	8.36	10.32	11.41	9.70	11.14	10.18
Number of Customers Affected Per Customer Served (SAIFI)	0.71	0.85	0.96	0.83	0.93	0.86

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CENTRAL HUDSON
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,514	6,911	7,538	6,386	6,857	6,841
Number of Customer-Hours	917,136	1,125,389	1,201,109	1,021,859	933,993	1,039,897
Number of Customers Affected	389,969	416,547	464,765	420,769	377,564	413,923
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.35	2.70	2.58	2.43	2.47	2.51
Average Duration Per Customers Served	3.21	3.89	4.10	3.46	3.13	3.56
Interruptions Per 1000 Customers Served	22.77	23.91	25.74	21.62	22.98	23.40
Number of Customers Affected Per Customer Served (SAIFI)	1.36	1.44	1.59	1.42	1.27	1.42

CENTRAL HUDSON
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,756	8,309	10,066	6,681	9,887	8,340
Number of Customer-Hours	994,057	1,735,705	2,649,690	1,117,802	3,705,277	2,040,506
Number of Customers Affected	405,534	530,319	643,778	444,813	642,949	533,479
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.45	3.27	4.12	2.51	5.76	3.62
Average Duration Per Customers Served	3.47	6.00	9.05	3.78	12.42	6.95
Interruptions Per 1000 Customers Served	23.62	28.74	34.38	22.62	33.13	28.50
Number of Customers Affected Per Customer Served (SAIFI)	1.42	1.83	2.20	1.51	2.15	1.82

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,216	10,585	10,541	11,321	11,645	10,662
Number of Customer-Hours	580,971	874,487	4,163,407	989,988	927,383	1,507,247
Number of Customers Affected	340,140	440,148	505,772	501,539	409,124	439,345
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.71	1.99	8.23	1.97	2.27	3.23
Average Duration Per Customers Served	0.18	0.28	1.31	0.31	0.29	0.47
Interruptions Per 1000 Customers Served	2.93	3.35	3.31	3.52	3.59	3.34
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.14	0.16	0.16	0.13	0.14

CON ED (SYSTEM)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,271	11,170	15,862	12,508	12,398	12,242
Number of Customer-Hours	601,167	1,119,510	9,023,979	1,781,740	1,225,917	2,750,463
Number of Customers Affected	345,663	482,133	733,204	570,760	452,915	516,935
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.74	2.32	12.31	3.12	2.71	4.44
Average Duration Per Customers Served	0.19	0.35	2.83	0.55	0.38	0.86
Interruptions Per 1000 Customers Served	2.95	3.53	4.98	3.89	3.82	3.83
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.15	0.23	0.18	0.14	0.16

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,360	4,967	4,274	5,571	5,485	4,931
Number of Customer-Hours	44,195	59,566	2,947,306	316,477	252,964	724,101
Number of Customers Affected	12,138	13,406	48,467	176,430	40,301	58,148
Number of Customers Served	2,319,321	2,339,622	2,363,897	2,361,145	2,385,760	2,353,949
Average Duration Per Customer Affected (CAIDI)	3.64	4.44	60.81	1.79	6.28	15.39
Average Duration Per Customers Served	0.02	0.03	1.26	0.13	0.11	0.31
Interruptions Per 1000 Customers Served	1.89	2.14	1.83	2.36	2.32	2.11
Number of Customers Affected Per Customer Served (SAIFI)	0.005	0.006	0.021	0.075	0.017	0.025

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (RADIAL)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,856	5,618	6,267	5,750	6,160	5,730
Number of Customer-Hours	536,776	814,921	1,216,101	673,511	674,419	783,146
Number of Customers Affected	328,002	426,742	457,305	325,109	368,823	381,196
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.64	1.91	2.66	2.07	1.83	2.02
Average Duration Per Customers Served	0.64	0.97	1.43	0.79	0.76	0.92
Interruptions Per 1000 Customers Served	5.81	6.67	7.39	6.73	6.97	6.72
Number of Customers Affected Per Customer Served (SAIFI)	0.39	0.51	0.54	0.38	0.42	0.45

CON ED (RADIAL)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,911	6,203	11,588	6,937	6,913	7,310
Number of Customer-Hours	556,972	1,059,944	6,076,673	1,465,264	972,954	2,026,361
Number of Customers Affected	333,525	468,727	684,737	394,330	412,614	458,787
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.67	2.26	8.87	3.72	2.36	3.78
Average Duration Per Customers Served	0.67	1.26	7.17	1.71	1.10	2.38
Interruptions Per 1000 Customers Served	5.88	7.37	13.67	8.12	7.82	8.57
Number of Customers Affected Per Customer Served (SAIFI)	0.40	0.56	0.81	0.46	0.47	0.54

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

LIPA
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,423	17,728	18,634	18,736	18,135	17,731
Number of Customer-Hours	942,669	999,412	1,129,275	1,190,411	1,166,613	1,085,676
Number of Customers Affected	908,253	931,276	823,396	995,077	856,405	902,881
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.04	1.07	1.37	1.20	1.36	1.21
Average Duration Per Customers Served	0.87	0.91	1.02	1.07	1.05	0.98
Interruptions Per 1000 Customers Served	14.16	16.17	16.89	16.90	16.33	16.09
Number of Customers Affected Per Customer Served (SAIFI)	0.83	0.85	0.75	0.90	0.77	0.82

LIPA
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,956	21,317	24,905	20,077	20,471	20,545
Number of Customer-Hours	1,105,002	1,675,011	2,564,134	1,564,559	1,998,270	1,781,395
Number of Customers Affected	986,170	1,177,059	1,289,698	1,142,365	1,208,292	1,160,717
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.12	1.42	1.99	1.37	1.65	1.51
Average Duration Per Customers Served	1.01	1.53	2.32	1.41	1.80	1.62
Interruptions Per 1000 Customers Served	14.65	19.44	22.58	18.11	18.43	18.64
Number of Customers Affected Per Customer Served (SAIFI)	0.91	1.07	1.17	1.03	1.09	1.05

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NATIONAL GRID
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	13,917	13,680	13,665	14,606	12,939	13,761
Number of Customer-Hours	3,274,229	3,598,884	3,289,340	3,045,363	2,334,754	3,108,514
Number of Customers Affected	1,602,708	1,551,448	1,607,461	1,518,634	1,188,585	1,493,767
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.04	2.32	2.05	2.01	1.96	2.08
Average Duration Per Customers Served	2.08	2.28	2.07	1.92	1.46	1.96
Interruptions Per 1000 Customers Served	8.82	8.66	8.62	9.19	8.12	8.68
Number of Customers Affected Per Customer Served (SAIFI)	1.02	0.98	1.01	0.96	0.75	0.94

NATIONAL GRID
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	14,760	16,211	16,279	16,222	18,301	16,355
Number of Customer-Hours	3,800,127	5,568,127	16,813,162	5,605,931	9,410,833	8,239,636
Number of Customers Affected	1,766,092	2,020,066	2,341,235	2,075,480	2,177,786	2,076,132
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.15	2.76	7.18	2.70	4.32	3.82
Average Duration Per Customers Served	2.41	3.52	10.61	3.53	5.90	5.19
Interruptions Per 1000 Customers Served	9.35	10.26	10.27	10.20	11.48	10.31
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.28	1.48	1.31	1.37	1.31

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NYSEG
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	8,946	10,190	9,682	10,317	10,027	9,832
Number of Customer-Hours	1,866,112	1,872,868	1,913,315	2,299,142	1,980,213	1,986,330
Number of Customers Affected	952,258	955,009	953,941	1,034,113	953,105	969,685
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05
Average Duration Per Customers Served	2.21	2.21	2.24	2.68	2.30	2.32
Interruptions Per 1000 Customers Served	10.59	12.00	11.33	12.00	11.66	11.48
Number of Customers Affected Per Customer Served (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13

NYSEG
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	10,269	14,364	12,835	12,928	17,008	13,481
Number of Customer-Hours	2,687,162	4,926,508	15,787,602	5,314,914	12,974,501	8,338,137
Number of Customers Affected	1,188,998	1,504,612	1,529,247	1,469,825	1,836,251	1,505,787
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	2.26	3.27	10.32	3.62	7.07	5.31
Average Duration Per Customers Served	3.18	5.80	18.48	6.18	15.09	9.75
Interruptions Per 1000 Customers Served	12.15	16.91	15.02	15.04	19.78	15.78
Number of Customers Affected Per Customer Served (SAIFI)	1.41	1.77	1.79	1.71	2.14	1.76

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

O&R
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,546	2,718	2,688	2,596	2,993	2,708
Number of Customer-Hours	440,617	493,591	397,977	356,514	470,431	431,826
Number of Customers Affected	274,124	289,022	264,121	222,895	256,943	261,421
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.61	1.71	1.51	1.60	1.83	1.65
Average Duration Per Customers Served	2.09	2.32	1.85	1.65	2.18	2.02
Interruptions Per 1000 Customers Served	12.10	12.80	12.53	12.00	13.88	12.66
Number of Customers Affected Per Customer Served (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22

O&R
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,729	3,123	3,546	2,738	3,655	3,158
Number of Customer-Hours	542,652	942,127	836,046	483,938	1,043,235	769,600
Number of Customers Affected	307,396	388,553	388,164	252,650	354,315	338,216
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.77	2.42	2.15	1.92	2.94	2.24
Average Duration Per Customers Served	2.58	4.44	3.90	2.24	4.84	3.60
Interruptions Per 1000 Customers Served	12.97	14.71	16.53	12.66	16.95	14.76
Number of Customers Affected Per Customer Served (SAIFI)	1.46	1.83	1.81	1.17	1.64	1.58

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

RG&E
Excluding Major Storms

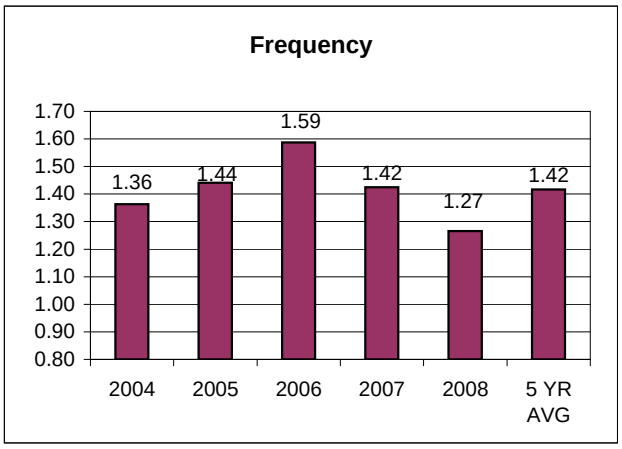
	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,896	3,207	3,004	2,784	2,807	2,940
Number of Customer-Hours	574,278	541,725	508,899	526,175	513,175	532,850
Number of Customers Affected	312,365	290,084	286,388	303,940	277,824	294,120
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81
Average Duration Per Customers Served	1.58	1.48	1.40	1.44	1.44	1.47
Interruptions Per 1000 Customers Served	7.96	8.79	8.24	7.63	7.86	8.10
Number of Customers Affected Per Customer Served (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81

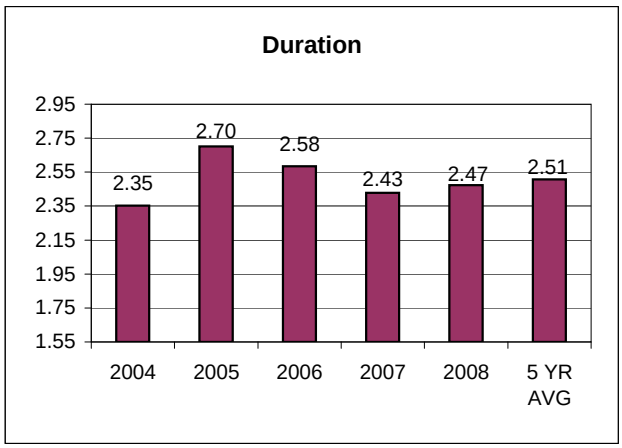
RG&E
Including Major Storms

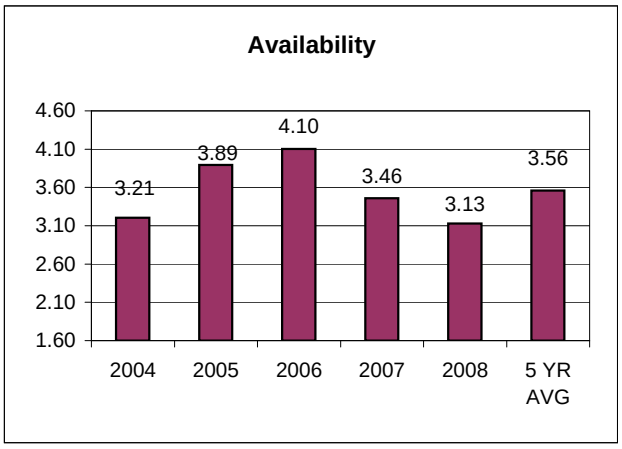
	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	3,065	3,443	3,241	3,107	3,828	3,337
Number of Customer-Hours	723,887	645,940	762,609	761,368	1,830,153	944,791
Number of Customers Affected	355,248	340,121	356,788	423,383	485,821	392,272
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	2.04	1.90	2.14	1.80	3.77	2.33
Average Duration Per Customers Served	1.99	1.77	2.09	2.09	5.12	2.61
Interruptions Per 1000 Customers Served	8.43	9.43	8.89	8.52	10.72	9.20
Number of Customers Affected Per Customer Served (SAIFI)	0.98	0.93	0.98	1.16	1.36	1.08

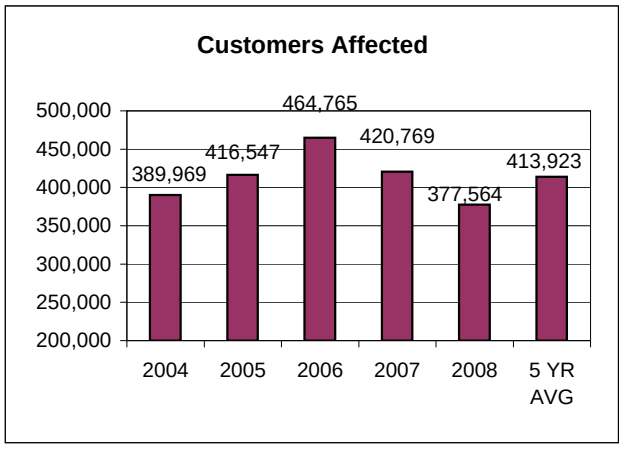
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

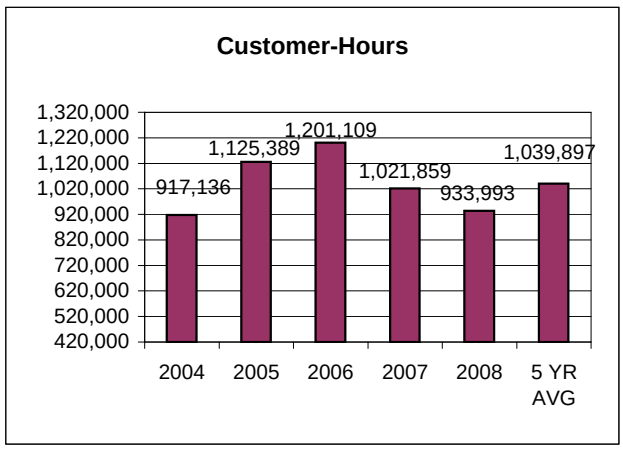
Central Hudson Gas and Electric
(Excluding Major Storms)

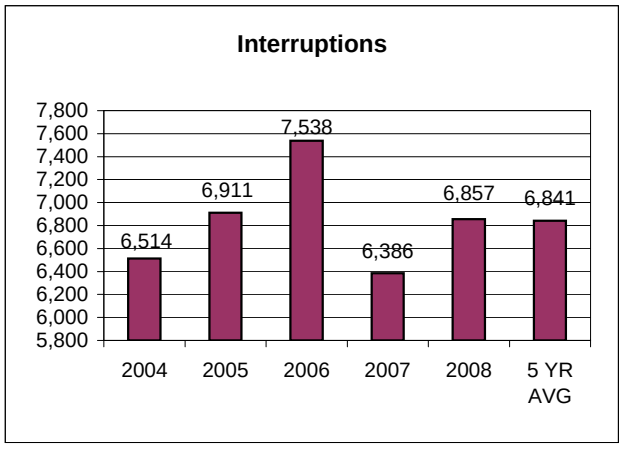




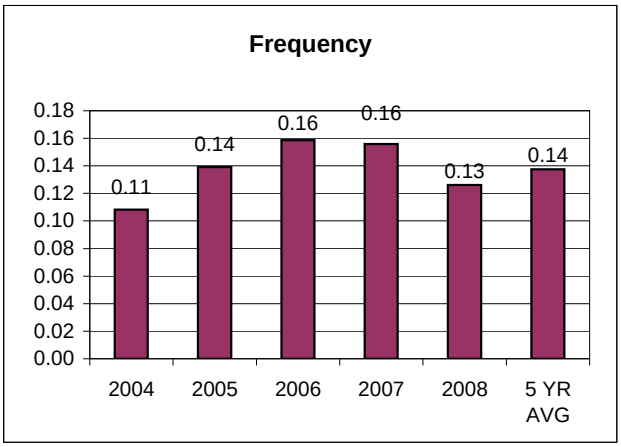


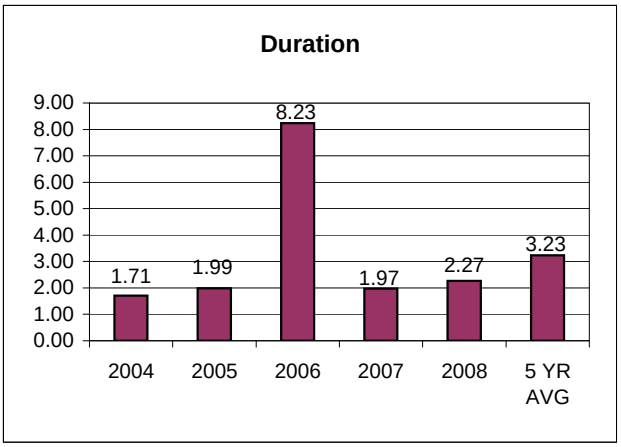


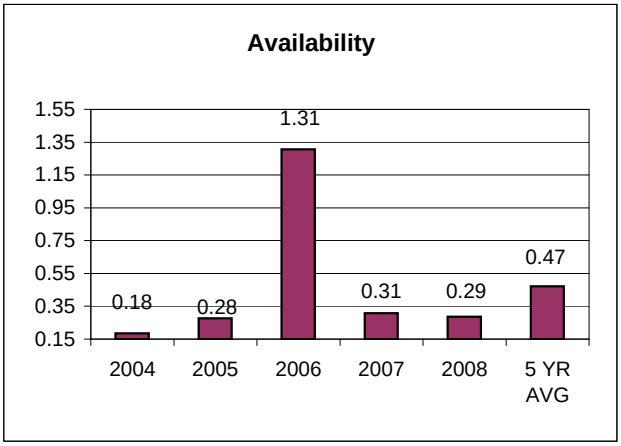


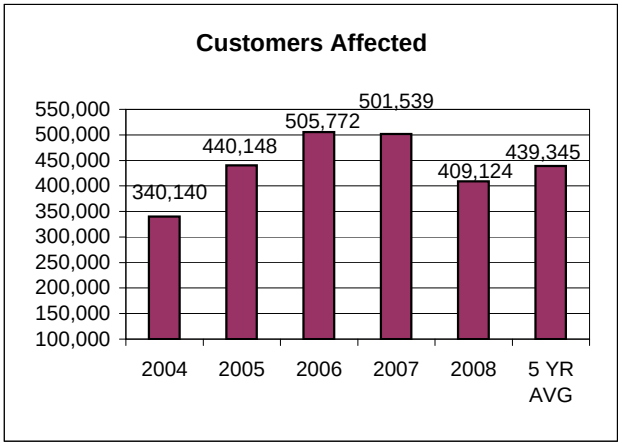


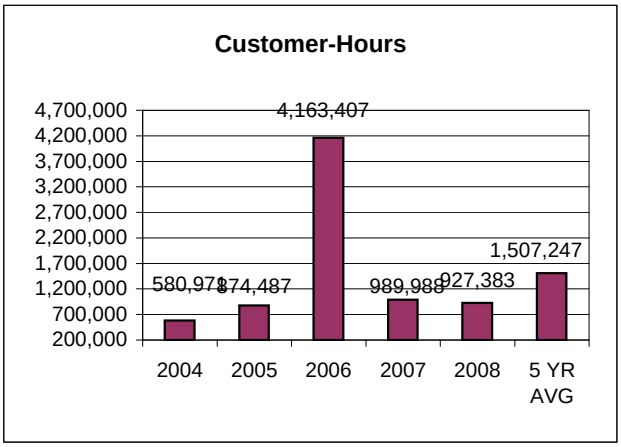
Consolidated Edison - System
(Excluding Major Storms)

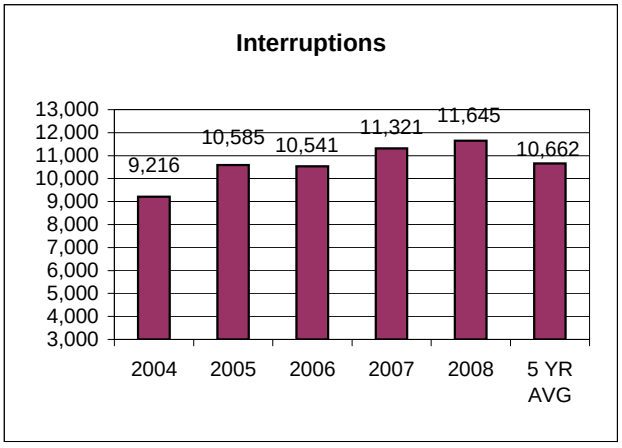




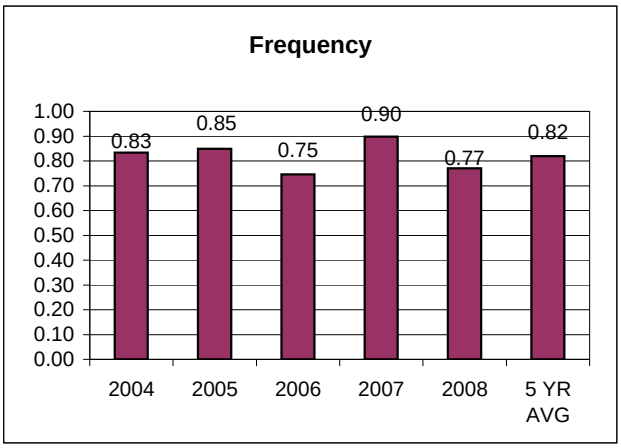


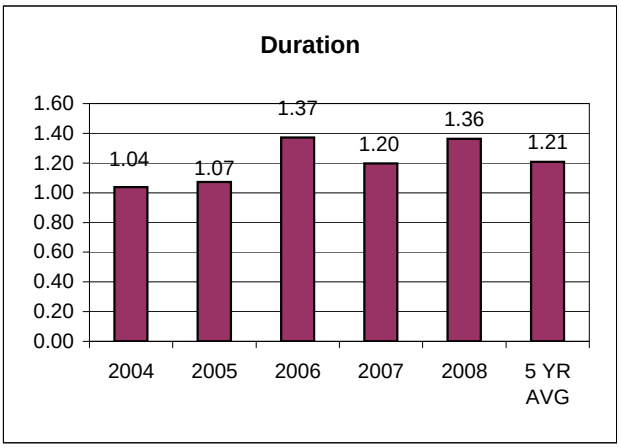


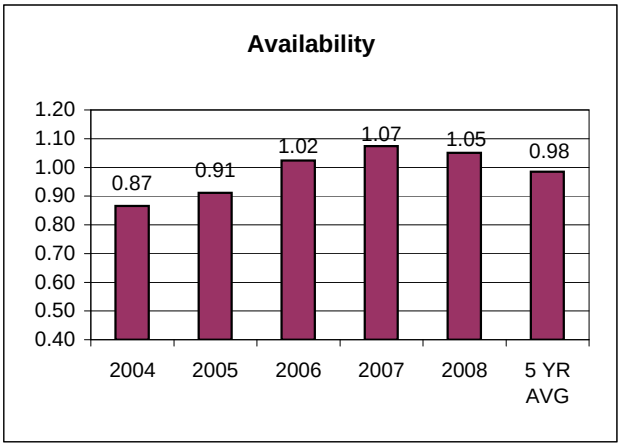


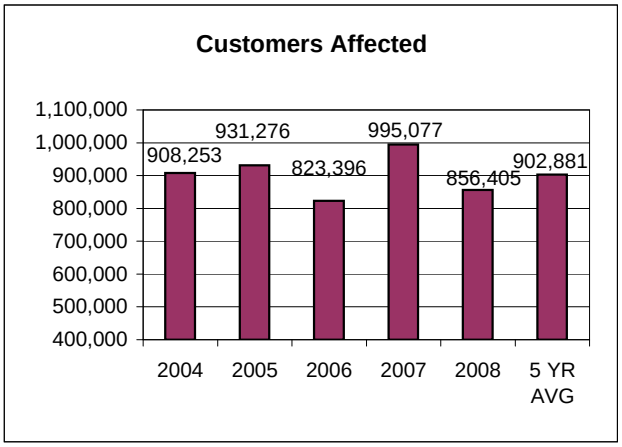


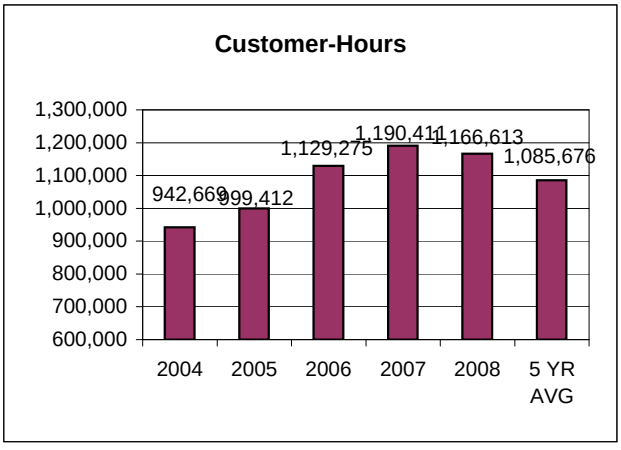
Long Island Power Authority
(Excluding Major Storms)

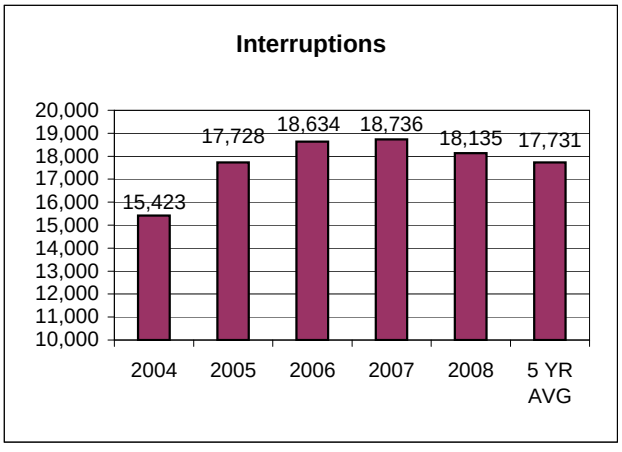








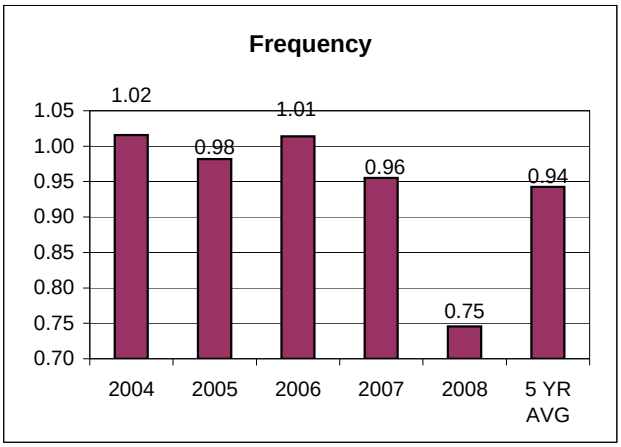


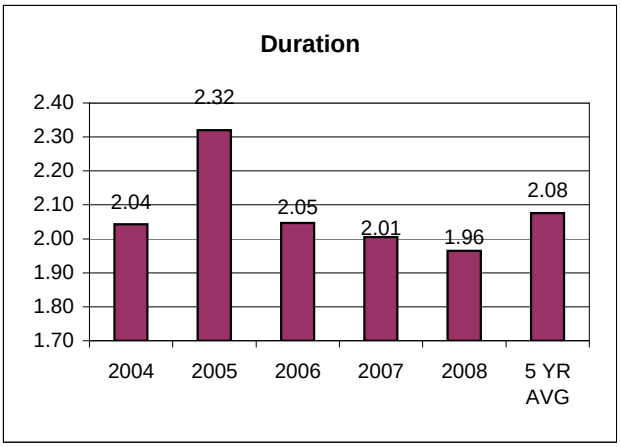


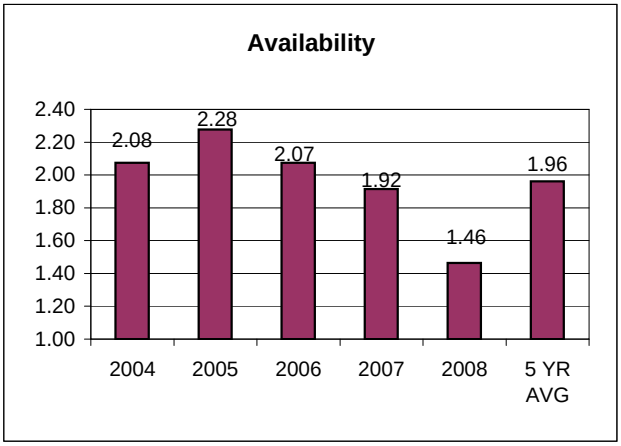
* LIPA is not regulated by the NYS PSC.

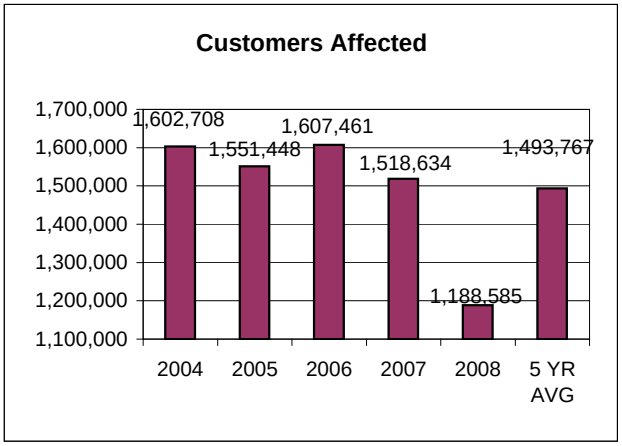
June, 2009

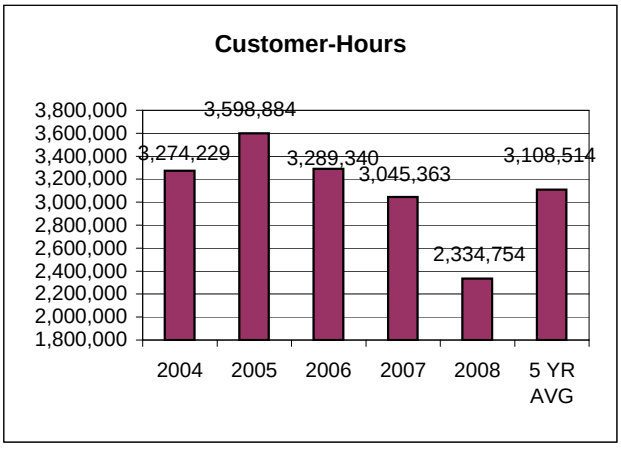
National Grid
(Excluding Major Storms)

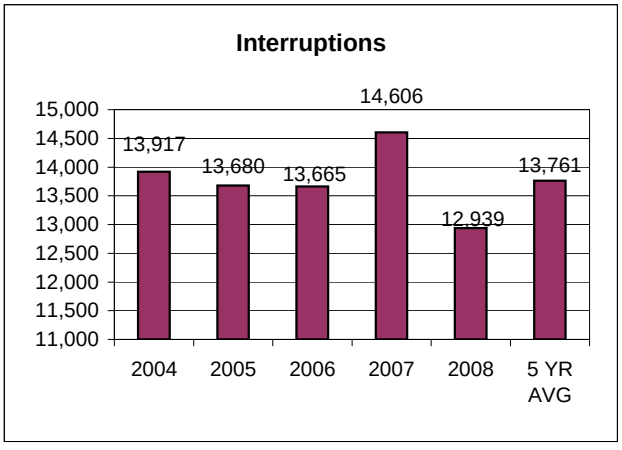




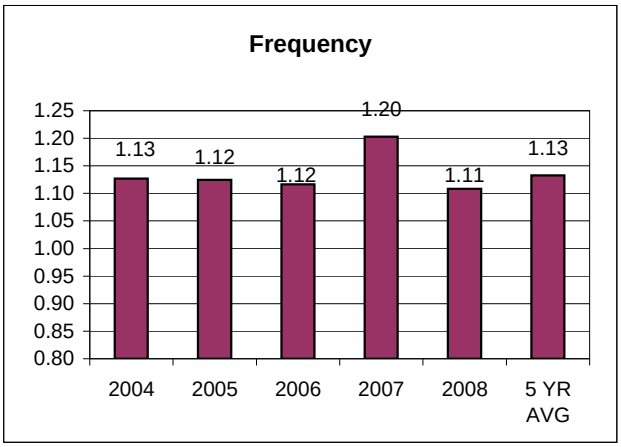


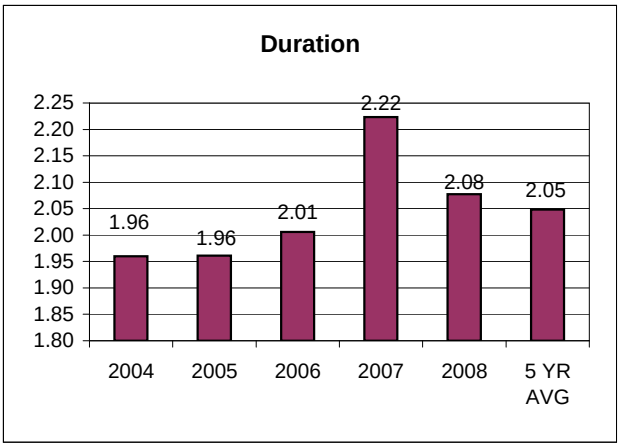


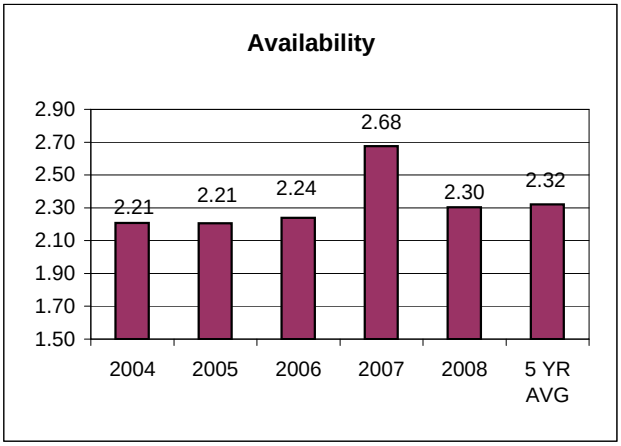


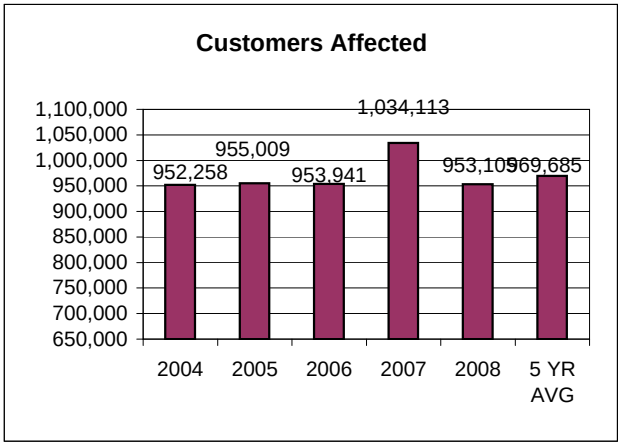


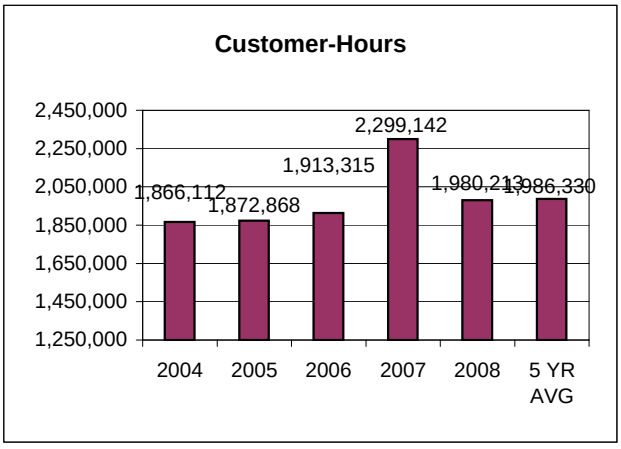
New York State Electric and Gas
(Excluding Major Storms)

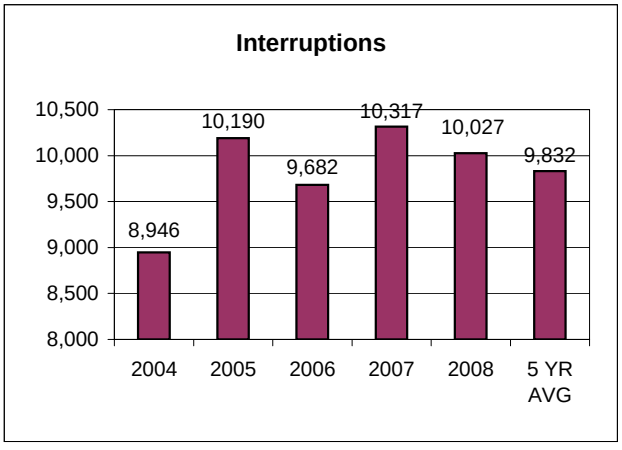




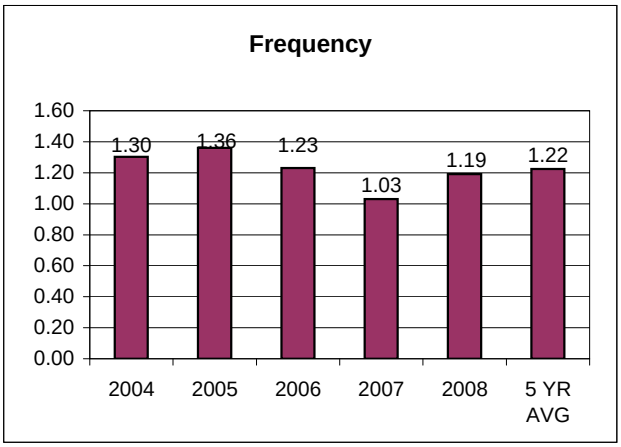


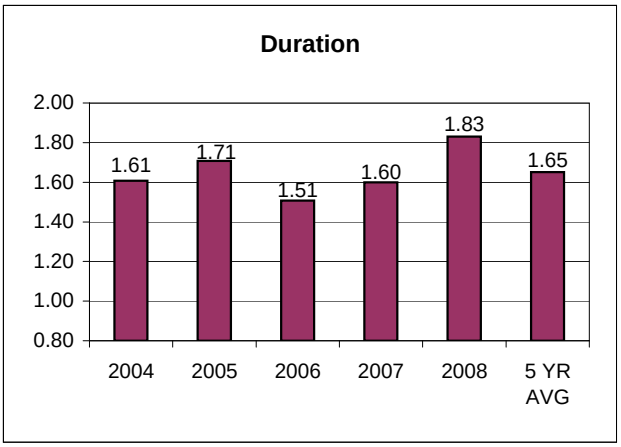


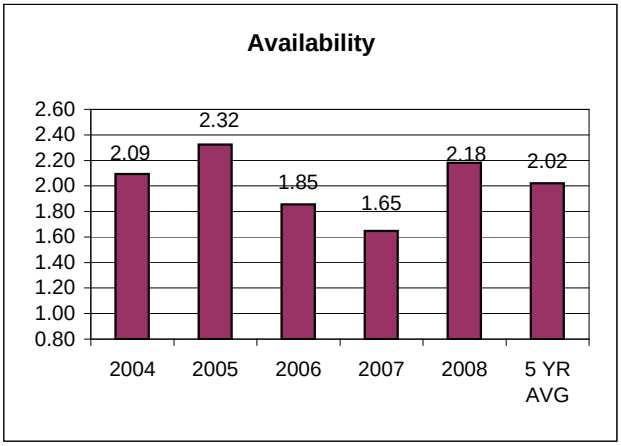


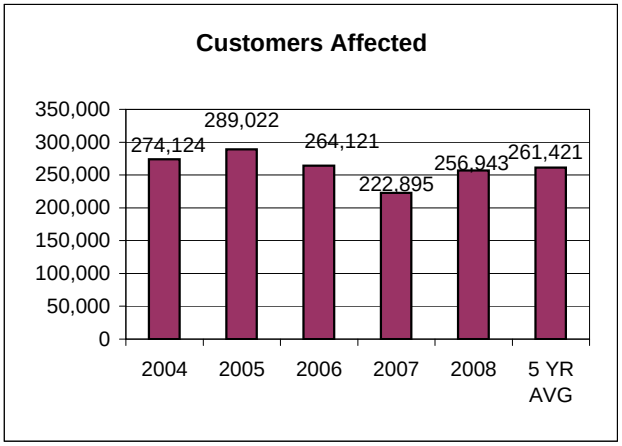


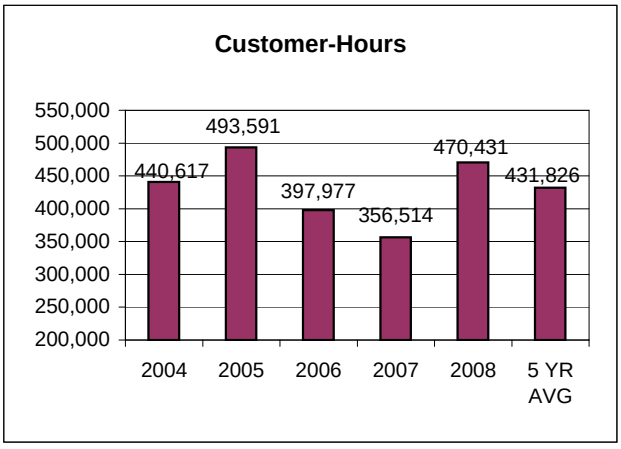
Orange and Rockland Utilities
(Excluding Major Storms)

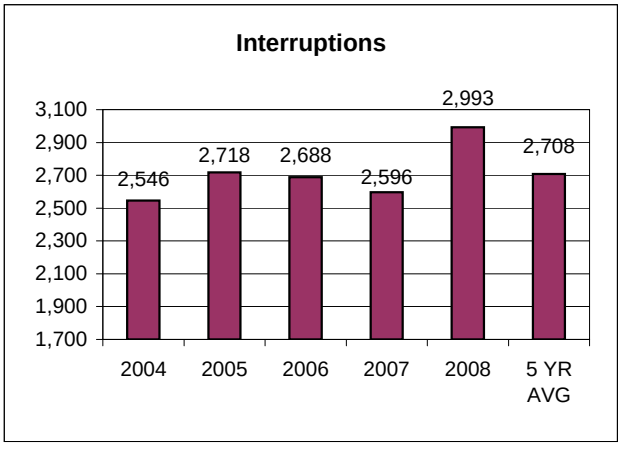




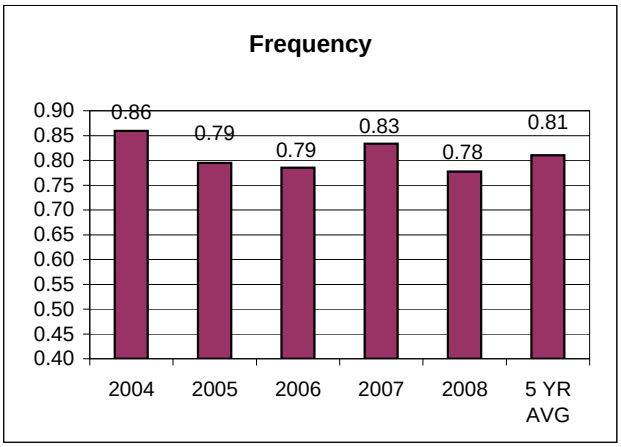


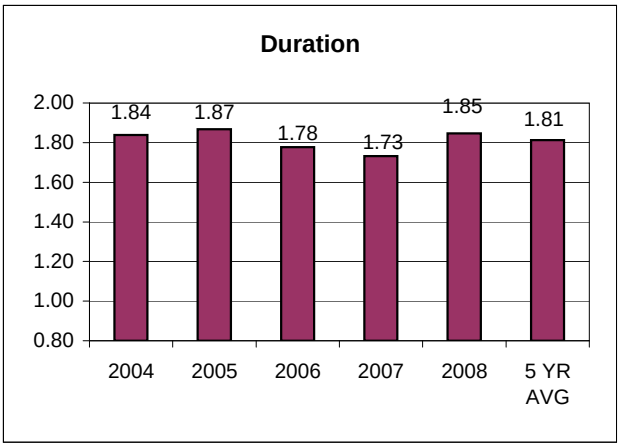


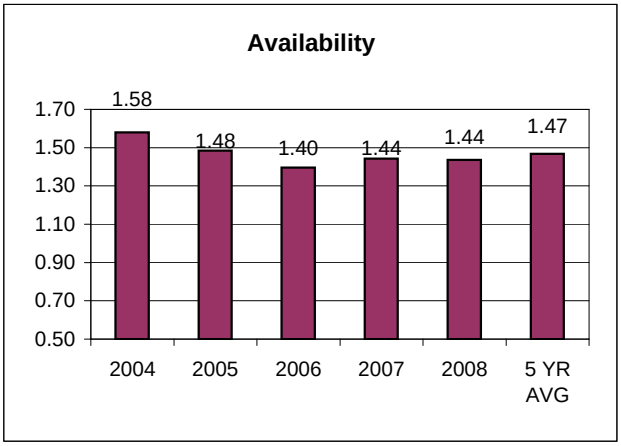


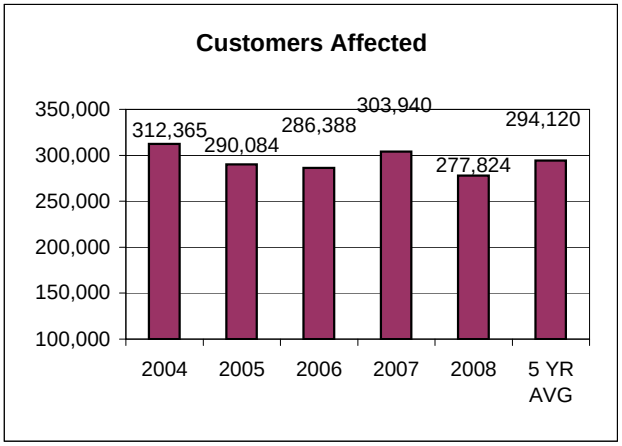


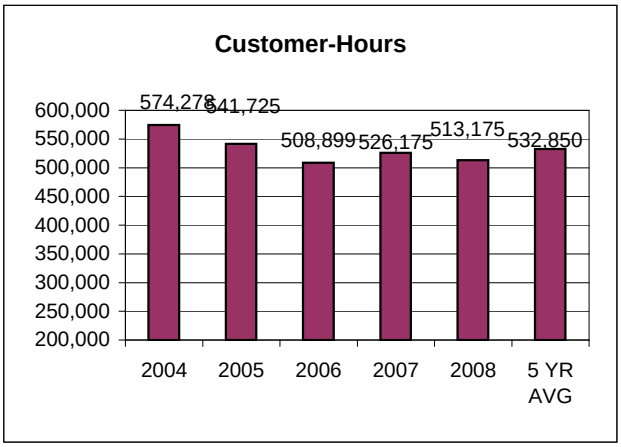
Rochester Gas and Electric
(Excluding Major Storms)

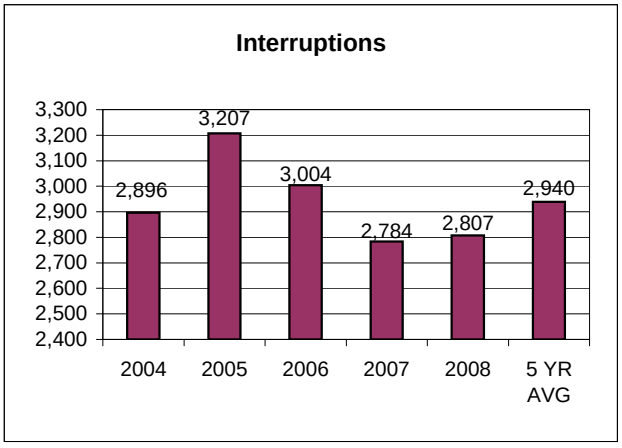








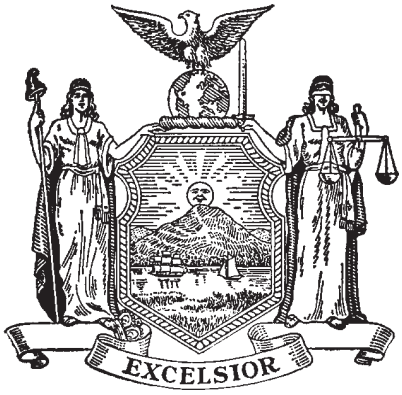




Filed Session of June 16, 2011

STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2010 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2011

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EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State for 2010. As a means of monitoring the levels of service, utilities are required to submit detailed monthly interruption data to the Public Service Commission (Commission). Staff primarily relies on two metrics commonly used in the industry to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] Frequency is influenced by factors such as system design, capital investment, maintenance, and weather.[2] Decisions made by utilities today on capital expenditures and maintenance policies, however, can take several years before being fully reflected in the frequency measure. Duration, on the other hand, is affected by work force levels, management of the workforce, and geography. By compiling the interruption data provided by the individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State. Recent data is also compared with historic performances to identify positive or negative trends. Finally, Staff reviews several other specific metrics that vary by utility to gauge electric reliability.

The statewide interruption frequency for 2010, excluding major storms, has been nearly identical for the past three years, and better than the five year average. Central Hudson Gas and Electric Corporation (Central Hudson) and Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) improved when compared with 2009. While the performances of the remaining four of the major electric companies were not as good as 2009 levels, they still performed satisfactorily and met the criteria in the performance mechanisms to which they were subject. For these companies, calendar year 2009 was also one of their best performing years in recent history.

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] To help achieve a balance between service interruptions under a utility's control, such as equipment failures, and those which a utility's control is more limited, such as an ice storm, we review reliability data both including and excluding severe weather events.

For the most part, duration performances were acceptable. Although, the statewide duration in 2010 was slightly worse than 2009, it was better than the five year average. In 2010, New York State Electric and Gas (NYSEG)'s and Rochester Gas and Electric (RG&E)'s duration was its best performance in the past five years.

Calendar year 2010 was historically one of the worst with respect to major storm effects. Three significant storms in the Hudson Valley and Downstate contributed to the entire State having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years.

With respect to individual utility performance in 2010, Consolidated Edison Company of New York's (Con Edison) generally performed satisfactorily. Due to concerns regarding the accuracy of the number of customers that were affected by an interruption in a network, we are now measuring network performance using two alternate measures: the number of interruptions per 1000 customers[3] and the average interruption duration. In 2010, Con Edison's network interruption performance was better than its 2009 performance, however, the Company's network interruption duration was worse in 2010 when compared to its 2009 performance. With regard to its radial system, Con Edison's radial system interruption frequency was nearly the same as its five year average. The radial system interruption duration performance declined compared to prior years, but was better than the five year average.

While NYSEG and RG&E had worse frequency performances in 2010 as compared with 2009, they are still much better than the Companies' respective performance targets. Outages associated with tree contacts and equipment failures continue to be a concern relative to NYSEG. In 2010, the companies have resumed investing in and maintaining their systems at more appropriate levels after low spending levels in 2009. As previously stated, the companies achieved their best duration performances of the past five years in 2010.

[3] An interruption is the loss of service for five minutes or more, for one or more customers. For example, a blown fuse that affects twelve customers is one interruption.

National Grid continues to perform well. The Company's recent infrastructure improvement and reliability focused programs are having a positive impact. Central Hudson's performance was better or consistent with its five year averages. Because of continuing tree issues, Central Hudson implemented a more rigorous tree trimming specification several years ago. Staff will perform field reviews of electric lines that are at or near the end of the first four-year trimming cycle. Orange and Rockland Utilities, Inc. (Orange and Rockland) performed satisfactorily with regard to interruption frequency, but not with respect to interruption duration. The Company has lacked consistency in its performances and Staff will be working with the Company to help reduce this variability.

All investor-owned electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The RPMs are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets. In 2010, Con Edison achieved the network outage duration metric and the remote monitoring system metric in its RPM only if the exclusions it is asserting are accepted by the Commission. Failure to achieve the performance levels set forth in these metrics may result in negative revenue adjustments of $5 million and $10 million, respectively. Con Edison is seeking exclusion of storm related outages and extraordinary circumstances in its Long Island City network, as permitted under certain circumstances in its RPM. If the exclusion is allowed, this would result in the Company meeting all RPM targets.[4] Orange and Rockland failed to achieve its interruption duration target in 2010, which would result in a negative revenue adjustment of $800,000. On March 16, 2011, Orange and Rockland filed a request for exemption for outages experienced during a storm on July 19, 2010. The request, if granted, improves the duration performance such that the Company would meet its target and not be subject to any negative revenue adjustments.[5] All of the other companies met their RPM targets.

[4] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

[5] Orange and Rockland's request for exemption has yet to be presented to the Commission for final action.

Overall, we are generally pleased with the steady electric reliability performance across the State. There are, however, individual concerns that are being addressed through various Staff efforts. This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water.

INTRODUCTION

This report provides an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service reliability, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission regarding electric service interruptions on a monthly basis.[6] The utilities provide interruption data that enables Staff to calculate two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information is grouped into 10 categories that delineate the nature of the cause of interruption (cause code).[7] Analysis of the cause code data enables the utilities and Staff to identify areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, arrestors could be installed on that circuit to try to minimize the effect of future lightning strikes. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which enables it to observe trends.

The Commission also adopted electric service standards addressing the reliability of electric service. The standards contain minimum acceptable performance levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31 of each year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing feeders. There are no revenue adjustments for failure

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause code covers events not entirely within in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report. The service standards were last revised in 2004.

In addition, utility performance is compared with utilities' RPMs established as part of the utilities' rate orders. RPMs are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The RPMs typically include targets for frequency and duration; some RPMs have additional measures to address specific concerns within an individual company.

2010 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities.[9] Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more. Major storm interruptions are excluded from the data used in calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Reliability performance data inclusive of major storms reflects the actual customer experience during a year.

Each year, Staff prepares an Interruption Report summarizing the monthly interruption data submitted by utilities. The 2010 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2010 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2010 and indicate company-specific trends where applicable.

Revenue adjustments for inadequate performance are implemented through individual RPMs which have been established in the utilities' rate orders.[10] Con Edison and Orange and Rockland failed to achieve targets in their reliability performance mechanisms for 2010. Con Edison failed to achieve the average interruption duration target for its network system and also failed its Remote Monitoring System target, resulting in a negative rate adjustment of $15 million. Orange and Rockland failed to achieve its interruption duration target, which results in a negative revenue adjustment of $800,000. The rate adjustments are preliminary assessments because both companies are

[9] Although LIPA is not regulated by the Commission, it supplies interruption data that is used to calculate statewide performance in this report.

[10] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

requesting exemptions, which are permitted under certain circumstances, and with which the companies would meet their targets and avoid any negative revenue adjustments.[11]

STATEWIDE

For many years, Staff has been combining individual utility performance statistics into overall statewide statistics. By doing so Staff is able to evaluate the level of reliability provided statewide and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks that are generally less prone to interruptions than overhead systems, its interruption frequency is extremely low (i.e., better) as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, Staff examines and presents aggregated data both including and excluding Con Edison's data.

Statewide, as may be seen in Figure 1, the frequency of interruptions excluding major storms was 0.57 in 2010; this is generally equivalent to the previous two years' performances and better than the five-year average. National Grid and Central Hudson had fewer customers affected by power outages in 2010 when major storms are excluded, while NYSEG, Con Edison, RG&E, and O&R had more customers affected. The frequency performance in 2010 for utilities other than Con Edison is 0.89, which is substantially the same as their frequency performance of 0.88 in 2008 and .090 in 2009, and better than the five-year average of 0.94.

[11] The requests have not been presented to the Commission for final action.

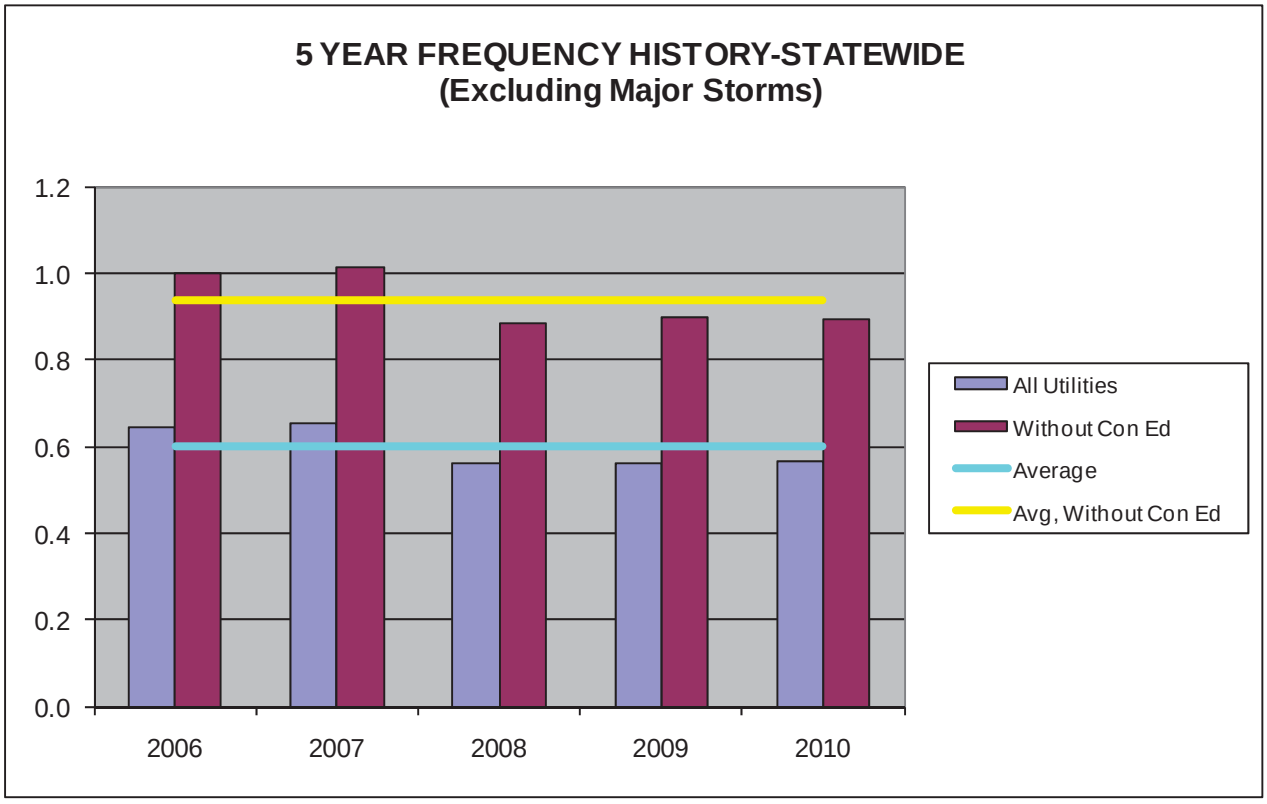


Figure 1: Statewide Frequency Performance

Figure 2 shows the historical statewide interruption duration index, excluding major storms. The 2010 overall statewide interruption duration index of 1.89 is slightly worse than 2009's 1.83, but is still consistent with the history of the past four years. When examining the chart, it should be kept in mind that Con Edison's Long Island City network outages in 2006 are still in the five year average. The statewide interruption duration index, excluding Con Edison, was 1.82 hours in 2010, which is the second best of the past five years.

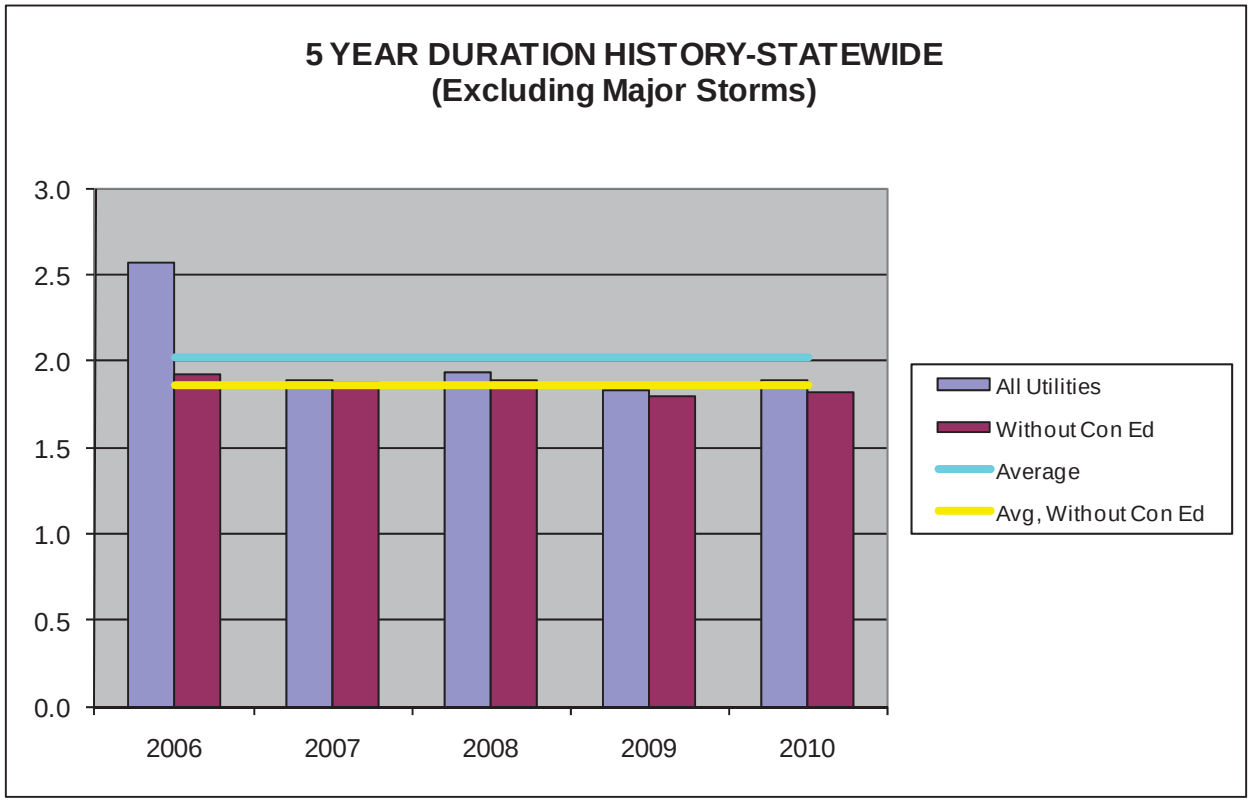


Figure 2: Statewide Duration Performance

While the overall number of major storms in 2010 was not atypical, three significant storms occurred in the Hudson Valley and Downstate. The three storms, summarized below, contributed to 2010 having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years (Figures 3 and 4, below). Because of the extended restoration times associated with these storms, the Commission requires the companies to file storm reports detailing restoration activities. [12] These reports were reviewed during the course of the year and determined that, in general, the utilities responded well.

- On February 23rd and 25th, heavy wet snow hit the Hudson Valley causing 300,000 customers to lose power. Central Hudson, Con Edison, NYSEG, and O&R were affected with overall restoration time exceeding a week. For Central Hudson, it was the worst storm in Company history since 1991, causing twice as much hours of customer interruption as Hurricane Floyd in 1999.

[12] 16 NYCRR Part 97, Part 105.4, requires utilities to file storm reports for outages lasting longer than three days.

- A March nor'easter swept the downstate area on March 3rd and affected 475,000 customers. Companies primarily affected were Con Edison, O&R, and LIPA. For Con Edison, it was the largest storm with respect to customer hours of interruption in Company history, with more than three times the amount experienced in Tropical Storm Ernesto in 2006.

- On September 16th, Tornados/Macrobursts hit downstate and affected Con Edison, O&R and LIPA, causing Con Edison 31,000 customers, mostly in Staten Island, Brooklyn and Queens, to lose power, some for extended times. The storms, while narrow in this geography, were notable in the magnitude of their destructiveness.

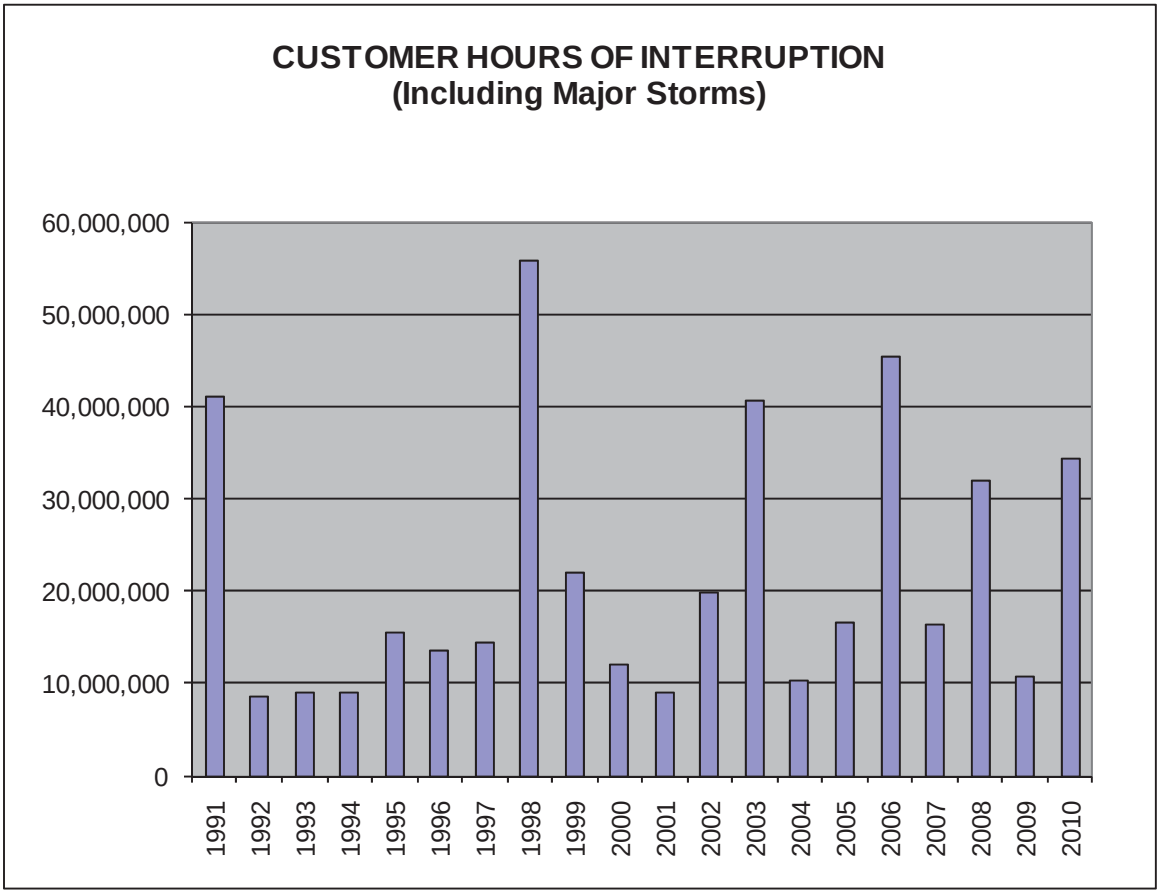


Figure 3: Customer Hours of Interruption (Including Major Storms)

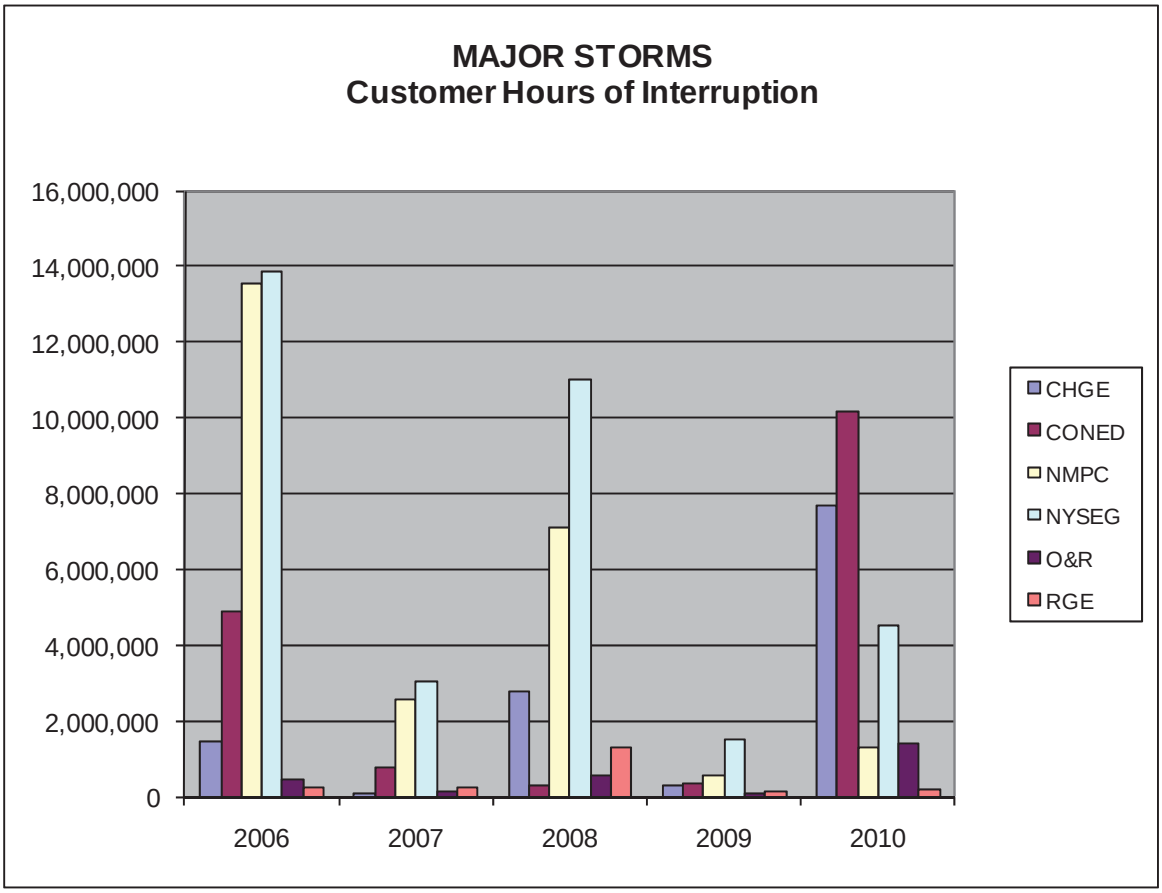


Figure 4: Major Storm Customer Hours

CON EDISON

Table 1: Con Edison's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Network Systems[13]						
Frequency				3.63	3.09	---
Duration				4.63	5.89	---
Radial System						
Frequency (SAIFI)	**0.54**	0.38	0.42	0.32	0.41	0.42
Duration (CAIDI)	**2.66**	**2.07**	1.83	1.74	1.95	2.05

Note: Data presented in red represents a failure to meet the RPM target for a given year.

[13] The duration and frequency metrics to measure network performance were replaced for 2009 with other measures.

Con Edison serves approximately 3.3 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design characteristics and underground settings, the majority of interruptions (78%) are associated with the service portion of the network system, as shown in Figure 5. Equipment failures (8%) are the next highest causes for interruptions in 2010 followed by Mains (7%).

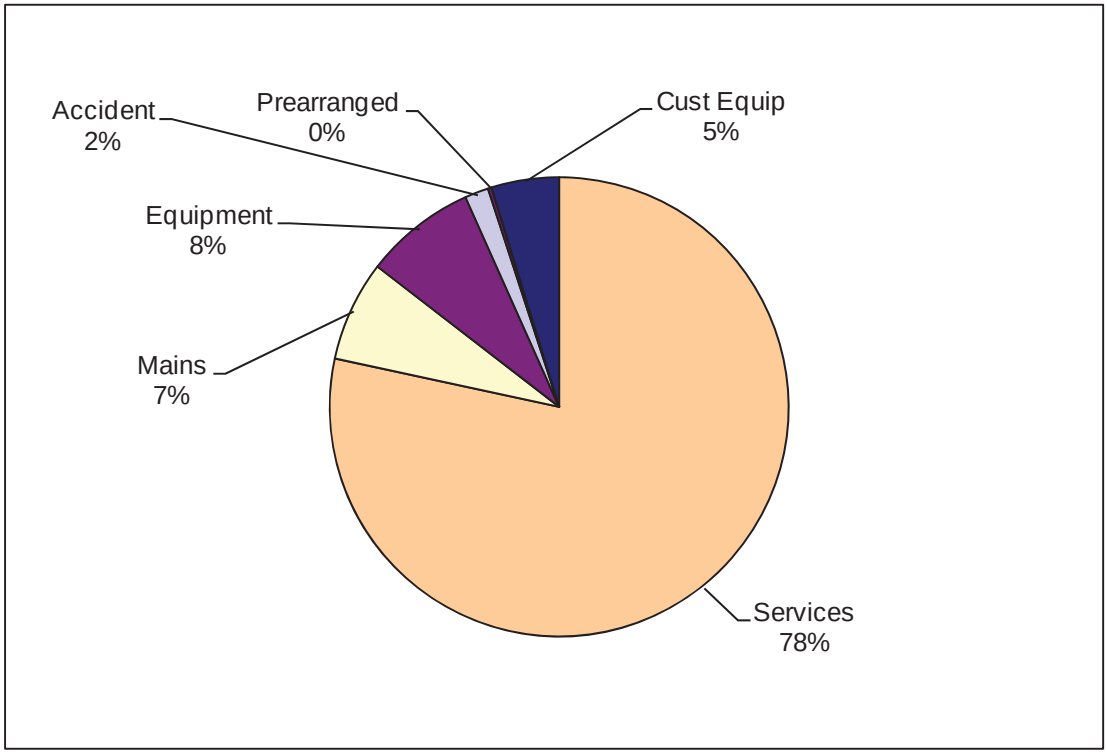


Figure 5: Con Edison's 2010 Network Interruptions by Cause

Due to concerns regarding the accuracy of the number of customers affected by an interruption in a network, we are now measuring network performance using two measures: the number of interruptions per 1000 customers and the average interruption duration. By using measures that are not based on the number of customers affected, we are able to monitor and trend network reliability performances without questioning the validity of the measures. In 2010, Con Edison's network interruptions

metric was better than its 2009 performance. The Company also achieved its RPM network interruption target for the past two years. With regard to duration, Con Edison performed worse in 2010 when compared to its 2009 performance. The Company did not meet its RPM target for average interruption duration in 2010. Con Edison is seeking exclusion of storm related outages from its interruption performance levels. It also failed to achieve the remote monitoring system metric in its RPM, but is seeking an exclusion due to extraordinary circumstances with regard to the Remote Monitoring System (RMS) criteria for its Long Island City network. If these exclusions are granted, the Company would meet the targets and not incur any negative revenue adjustment. [14]

On its radial system, Con Edison's frequency in 2010 of 0.41 was worse than 2009's performances and nearly equal to its five year average. The Company met its RPM frequency target of 0.495 for 2010. Equipment failures are responsible for 75% of the interruptions on the radial system, followed by trees and accidents at 9% and 8%, respectively, as shown in Figure 6.

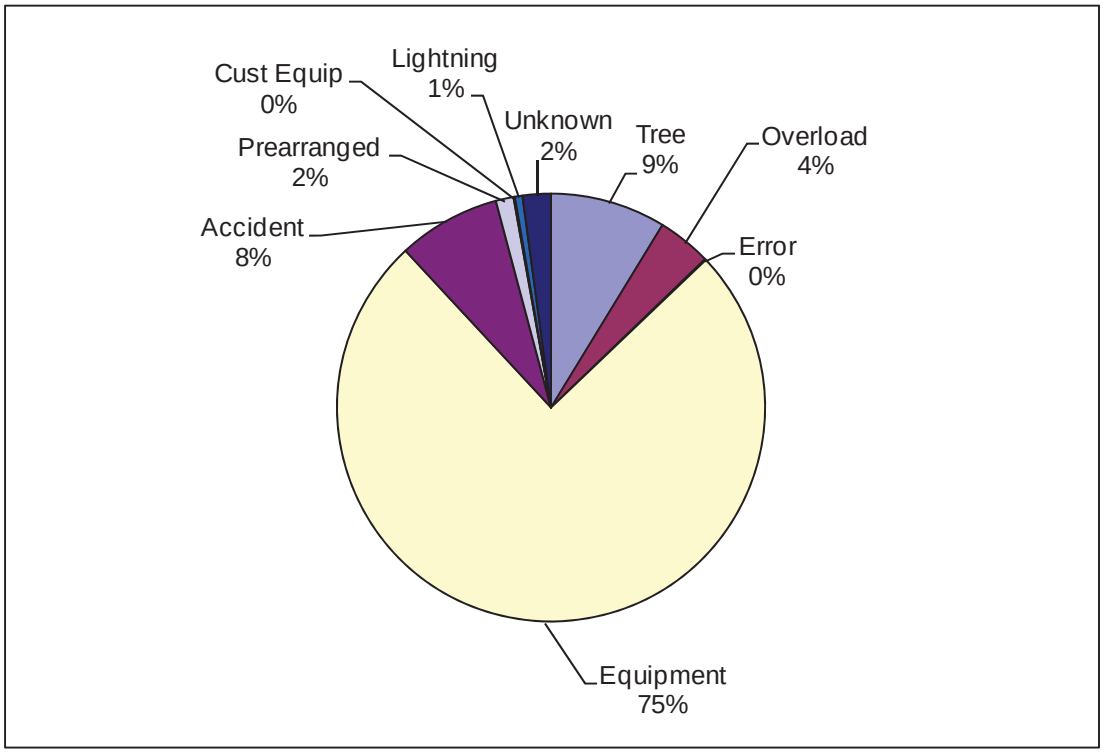


Figure 6: Con Edison's 2010 Radial Interruptions by Cause

[14] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

With respect to duration, Con Edison's radial performance in 2010 was worse than the previous two years. While the Company passed its RPM target of 2.04, duration performance is something we and the Company are monitoring closely. In response to a self-assessment recommended by Staff, Con Edison developed and implemented duration improvement strategies for both its radial and network system. To improve crewing efficiency and reduce outage duration, the Company has increased use of first responder staffing, increased the ability to mobile dispatch work to crews, and improve training resources. Con Edison stated that enhancements have been made to the process utilized for its outage management system to flag large outage jobs, and it now employs an automatic call out process for additional crews. The Company also continues to improve the reliability of its system by installing switches and other rapid restoration technologies. Given the focus and efforts Con Edison has put into place regarding duration, we believe 2010's performance is acceptable.

NATIONAL GRID

Table 2: National Grid's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.01**	**0.96**	0.75	0.88	0.80	0.88
Duration (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's 25,000 square mile territory includes metropolitan areas, such as the cities of Buffalo, Albany, and Syracuse, as well as many rural areas in northern New York and the Adirondacks.

In 2010, National Grid achieved both its reliability targets, comprising three consecutive years of positive performance. The Company's frequency level of 0.80 in 2010 improved as compared with 0.88 in 2009, and is well below its frequency target level of 0.93. The duration performance for 2010 was worse than 2009, but equal to its historic five-year average, and better than its duration target of 2.07 for five consecutive

years. National Grid also provided consistent service on a region by region basis. In 2010, the Company's Northeast division failed to achieve its duration expectation and the Capital Region barely missed its frequency expectation. As previously discussed, the divisional expectations are defined by our Electric Service Standards.

Historically, equipment failures were National Grid's leading cause of interruptions. Aged equipment, leading to poor frequency performances in mid 2000 necessitated the Company's significant investment in capital improvement projects aimed at improving reliability. As a result of the upgrades and modifications to its distribution system, the percentage of interruptions caused by equipment failures is now less than tree related electric service interruptions for 2010 (see Figure 7, below). It should be noted, however, that tree-related outages were worse in 2009 and 2010 when compared to historic interruption rates. Analysis of the data indicates that the increase in tree related interruptions is attributable to increased broken limb conditions. Interruptions caused by re-growth and danger trees, however, were both lower in 2010 than in 2009. As a result, National Grid is not recommending changes to its five year trimming cycle or hazard tree removal program. To help reduce it tree-related outages, National Grid is doing additional off-cycle trimming and trimming on worst performing circuits in 2011.

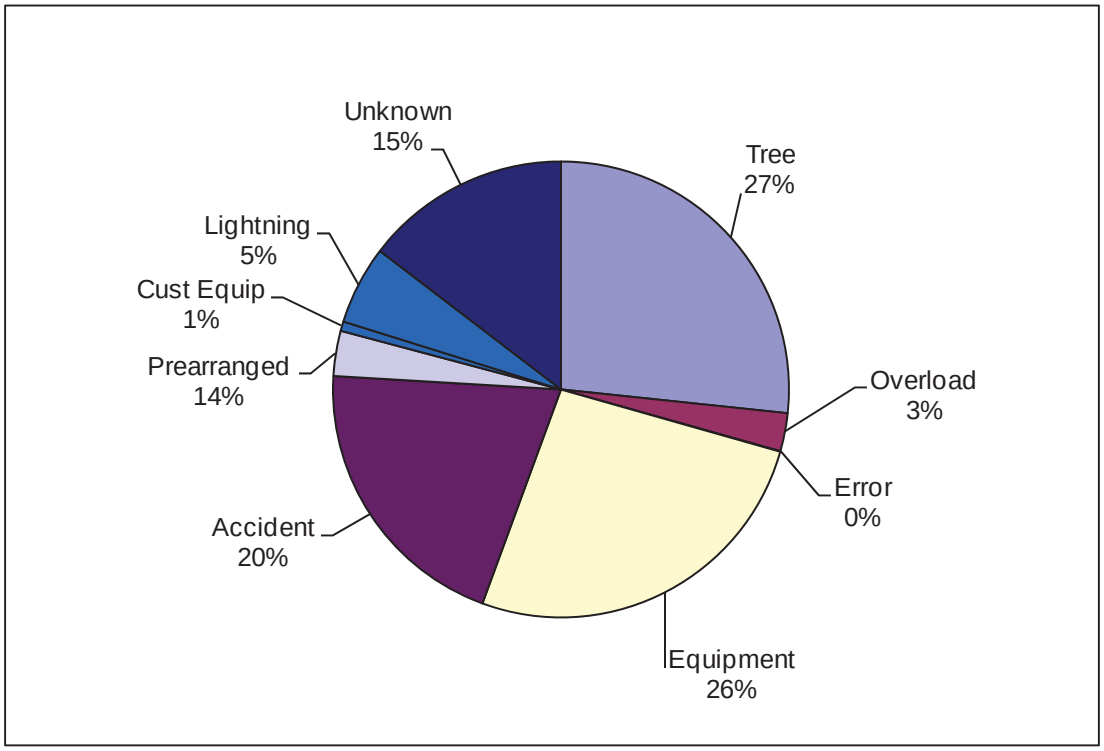


Figure 7: National Grid's 2010 Interruptions by Cause

In addition to improved performance on equipment failures, National Grid has decreased the number of customers affected when a failure occurs (see Table 3). The average number of customers affected by an interruption has been reduced from over 100 customers per interruption to approximately 90 customers per interruption in each of the last three years. National Grid credits the reduction to its effort to sectionalize lines via recloser and side tap fuse installations. National Grid's Line Recloser Program installs 100 additional reclosers per year and is expected to continue to limit the number of customers affected by a single interruption.

Table 3: National Grid's Historic Customers Affected per Interruption

	2006	2007	2008	2009	2010
Average number of customers affected per interruption	118	104	92	87	92

National Grid now uses a system that establishes repair work orders in direct response to inspection findings. Based on its success in repairing deteriorated items under its inspection and maintenance, National Grid will be discontinuing focused programs, such as the Pole Replacement Program and Feeder Hardening Program in 2011. While these programs were helpful in reducing National Grid's frequency performance over the past years, it is appropriate for the Company to consolidate its efforts in the interest of prioritizing and scheduling efficiencies. We expect that National Grid will continue to address reliability concerns on worst performing feeders, either through engineering reliability reviews or alternate methods, and maintain at least the current level of performance in future years.

NEW YORK STATE ELECTRIC AND GAS

Table 4: NYSEG's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13
Duration (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06

Approximately 858,269 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

NYSEG's frequency performance of 1.14 was worse when compared with 2009's performance of 1.08, but nearly the same as the five year average. The 2010 duration performance of 1.98 was the best in the past five years. Overall, NYSEG's performance is satisfactory and the Company was able to meet its RPM reliability targets of 1.20 for frequency and 2.08 for duration.

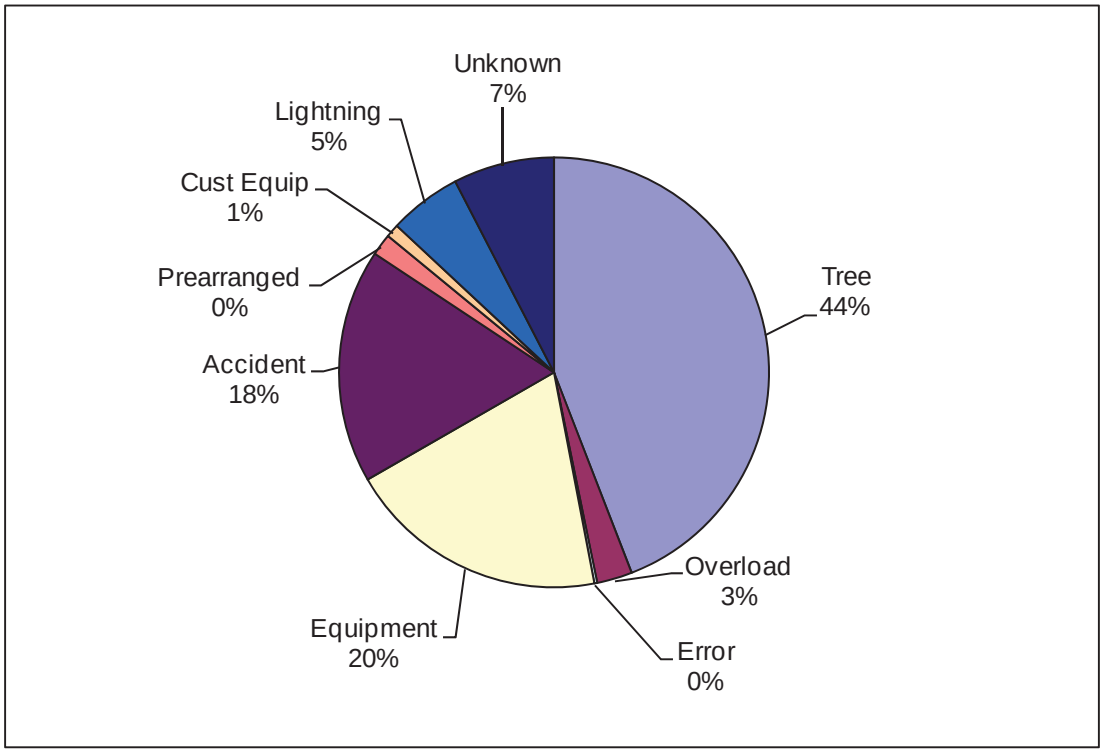


Figure 8: NYSEG's 2010 Interruptions by Cause

As shown in Figure 8, tree contacts (44%), equipment failures (20%), and accidents (18%) remain the predominant causes of interruption throughout NYSEG's twelve operating divisions in 2010. NYSEG has one of the worst frequency rates which is caused primarily by customers affected by tree interruptions. As a result, NYSEG needs to continue to focus on improving its distribution vegetation management program and reducing tree related outages. The Commission approved increased funding for distribution vegetation management activities as part of its last 2010 rate case agreement to help move NYSEG towards full cycle trimming activities. Therefore, Staff expects NYSEG to address the issue of tree trimming more aggressively and undertake measures to identify and perform trimming in areas where tree related outages are more frequent.

Equipment failures are NYSEG's second major cause for interruption. For the past two years, it accounted for 20% of the total number of interruptions. NYSEG has been addressing equipment failures under its Transmission and Distribution Infrastructure Replacement Program (TDIRP) program. The TDIRP program replaces electrical T&D equipment based on the condition, age, and failure characteristics of the specific item based on the Company's experience and knowledge. Funding for the

TDIRP program was reduced significantly in 2009 to approximately $6.0 million from historical levels of approximately $23 million annually.[15] In 2010, NYSEG began to invest in its system at close to or higher than historic levels. The most recent rate case supported $25 million in expenditures for the TDIRP efforts annually, to bring the Company back up to pre 2009 spending levels. The reinvestment into this program is expected to help reduce outages related to equipment failures and improve the system reliability on a going forward and proactive basis. Staff will continue to monitor the Company's performance on these issues.

ROCHESTER GAS AND ELECTRIC

Table 5: RG&E's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74
Duration (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77

RG&E serves approximately 358,109 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better utilities in the state by continually performing better than its RPM targets of 0.90 for frequency and 1.90 for duration, as established in its rate orders. As shown in Table 5, RG&E's performance for frequency and duration is fairly consistent with its five year average. The Company's frequency performance of 0.71 in 2010 was an increase from 0.59 in 2009; however, the 2009 performance was the best in the past five years. RG&E's duration performance of 1.71 in 2010 was better than in 2009 and better than the five-year average.

[15] In 2009, the Company reduced all expenditures to essential needs only while stating financial issues within the Company as the reasoning behind the reduced spending.

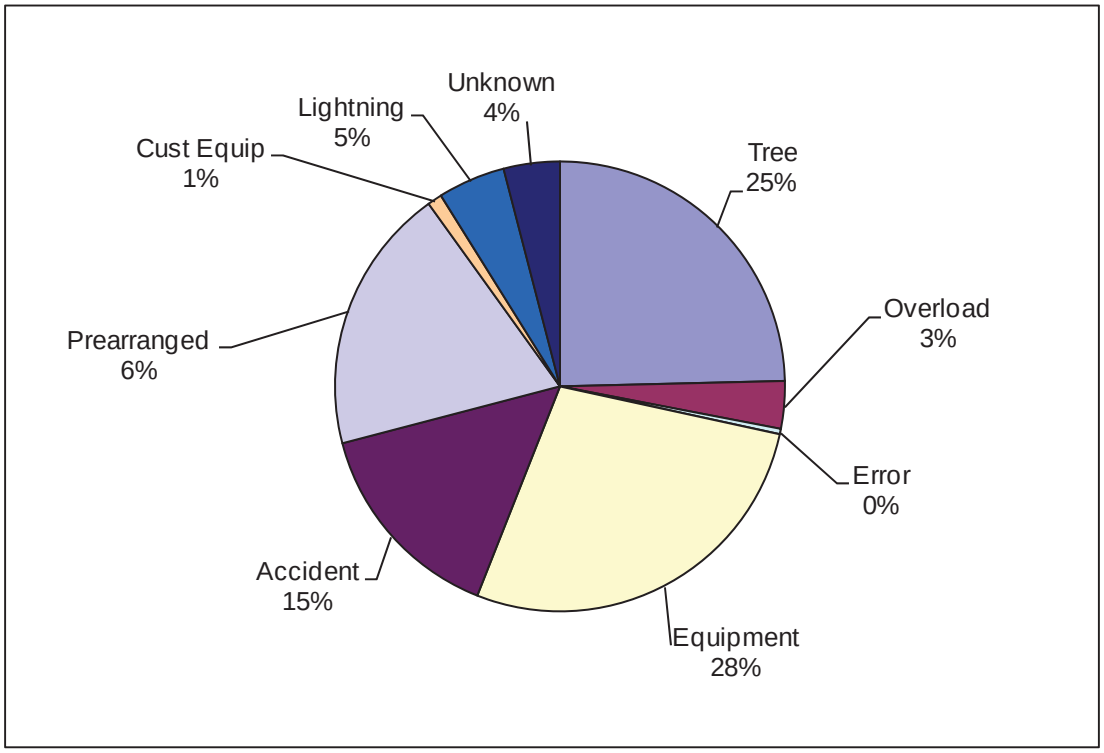


Figure 9: RG&E's 2010 Interruptions by Cause

Figure 9 shows that the two major contributors to interruptions in 2010 continue to be equipment failures (28%) and tree contacts (25%). Similar to NYSEG, funding for RG&E's Transmission and Distribution Infrastructure Replacement Program (TDIRP) was reduced due to Company financial issues in 2009 and the beginning of 2010. In the last rate case, the Commission supported expenditures for the TDIRP efforts, in the amount of $15 million annually, to bring the Company back up to pre 2009 spending levels. Likewise, the Commission also supported increased expenditures for vegetation management, in the amount of $6.6 million annually, allowing the Company to implement a full system vegetation management (tree trimming) cycle program. Staff believes that these two programs and associated expenditures will help reduce outages and improve the system reliability going forward on proactive basis.

CENTRAL HUDSON GAS AND ELECTRIC

Table 6: Central Hudson's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.59**	1.42	1.27	1.37	1.27	1.38
Duration (CAIDI)	**2.58**	2.43	2.47	2.22	2.42	2.43

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh.

Central Hudson's frequency performance of 1.27 in 2010 was better than 2009 and ties its five-year best. The Company's duration performance of 2.42 in 2010, on the other hand, was slightly better than average. Figure 10 shows that 38% of customer interruptions were due to tree related issues, followed by accidents which comprised 25%. In 2010, the Company achieved its RPM targets of 1.45 for frequency and 2.50 for duration.

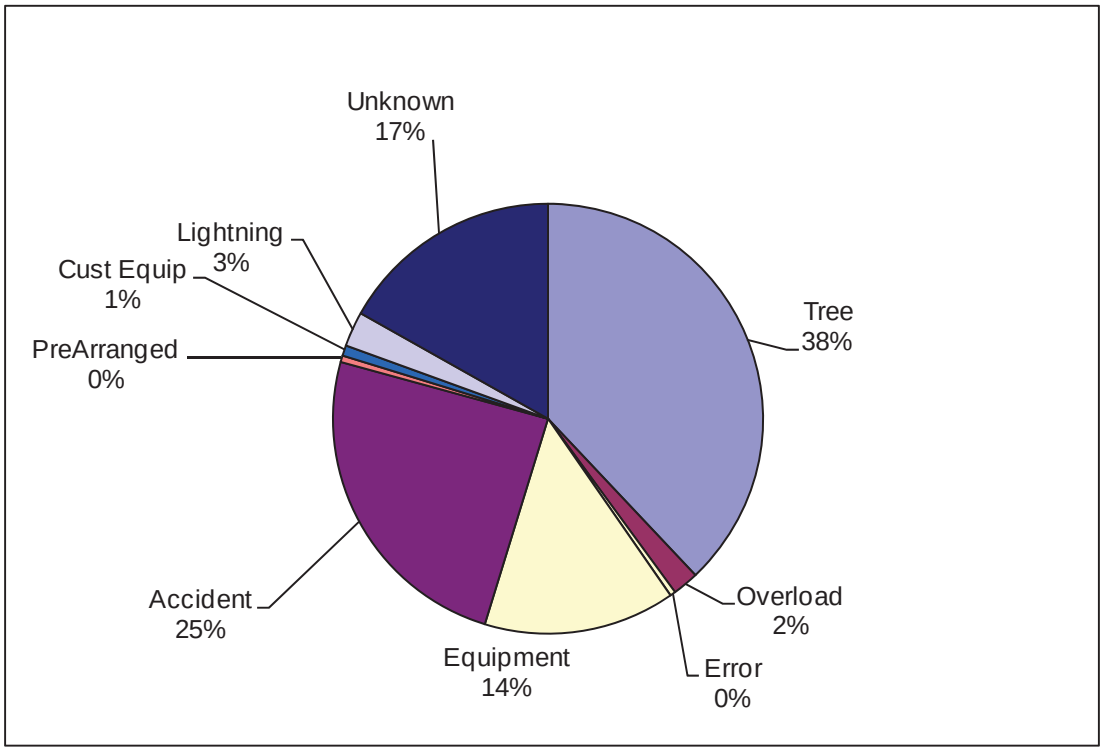


Figure 10: Central Hudson's 2010 Interruptions by Cause

As is the case with most overhead distribution utilities, trees are a primary cause of outages (Figure 10, above). The Company as a whole suffers more tree interruptions per customer served than any other major New York electric utility. Since 2007 Central Hudson has done vegetation line clearance in accordance with a new, improved specification. Using greater level of detail available to it, the Company reports a trend of decreasing interruptions resulting from trees falling inside its trimming zone. Staff will follow-up this summer with the Company and perform field reviews of electric lines that are at or near the end of the four-year trimming cycle.

The Unknown and Accident categories historically make up large portions of electric interruptions for all New York utilities, and this is the case for Central Hudson as well. Staff will be looking more closely with the Company at these classifications of outages to see if the Company's performance can be improved.

Equipment failures cause a large number of electric interruptions as is the case with most electric utility companies. Central Hudson is continuing several programs to decrease the number of these interruptions, including programs for substation breaker replacement, porcelain cutout replacement, 14kV paper and lead cable replacement, automatic load transfer switch installation, and aging recloser replacement (including remote communication). In addition, the Company has a program to upgrade individual circuits.

ORANGE AND ROCKLAND

Table 7: O&R's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.23	1.03	1.19	0.96	1.21	1.13
Duration (CAIDI)	1.51	1.60	**1.83**	1.66	**1.79**	1.68

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland serves approximately 218,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2010, the

Company met its reliability performance mechanism target of 1.36 for frequency with a frequency of 1.21; however, it failed to achieve the duration target of 1.70 with a 1.79 performance.[16] As the table above shows, the 2010 frequency and duration performance levels were both much worse than last years and continue ORU's sporadic performance trend from year to year. The 2010 results were worse than the 5 year averages and are similar to those in 2008 when the Company again failed to achieve its duration target. Staff will continue to work with the Company to help reduce the variability in performances.

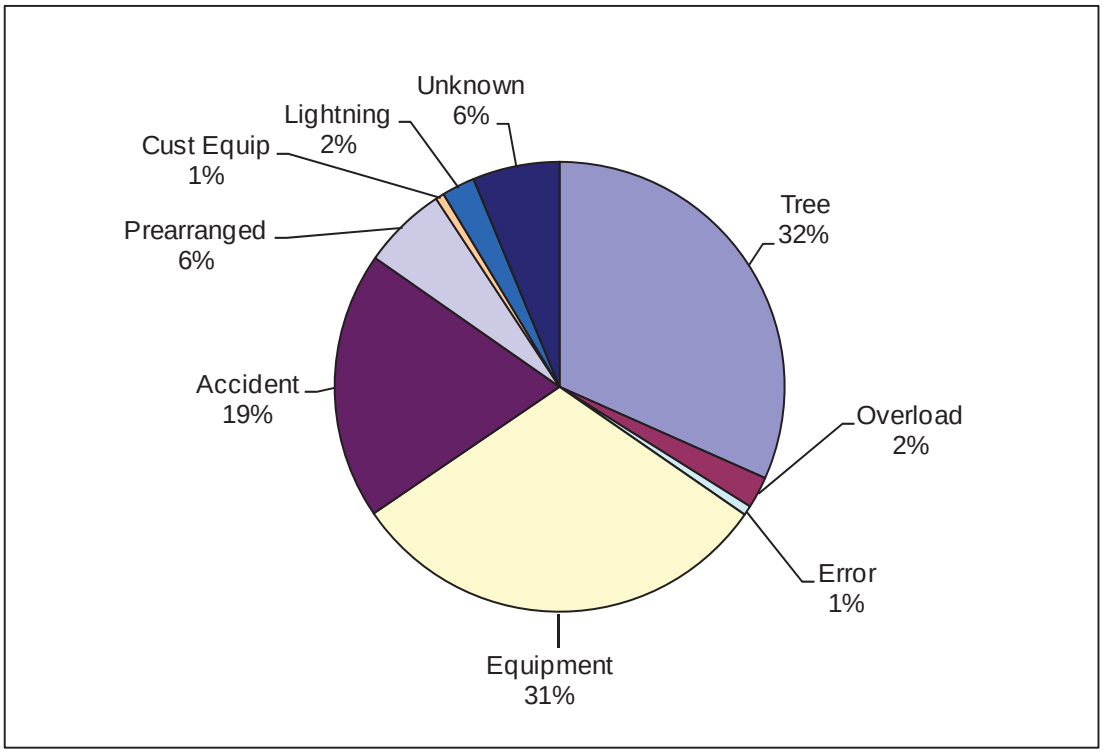


Figure 11: Orange and Rockland's 2010 Interruptions by Cause

As shown in Figure 11, tree contacts (32%) and equipment failures (31%) caused the majority of interruptions in 2010. Orange and Rockland is addressing reliability issues resulting from equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable

[16] The Company has filed a petition to the Commission for exemption from the RPM revenue adjustment, related to a storm that affected its Eastern Division on July 19, 2010. This petition has not been acted on by the Commission.

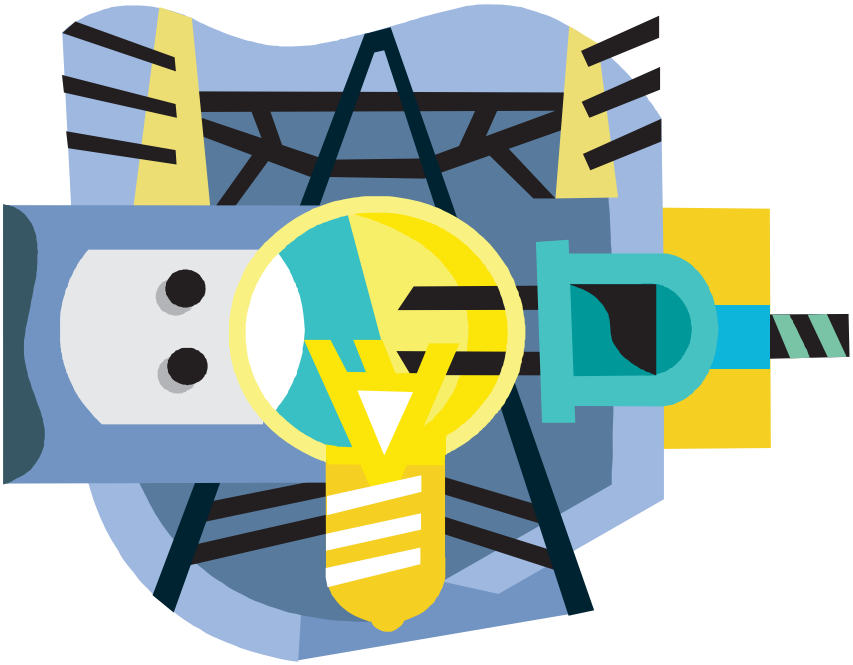
Maintenance and Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

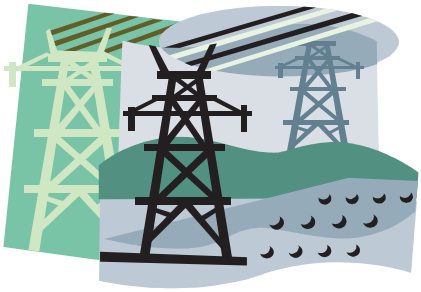
The Company continues to address concerns regarding tree-related outages through increased efforts on its line clearance programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify and perform supplemental trimming to address areas with recurring tree related outages. These programs are expected to reduce the impact of tree contacts on the Company's electrical system through the coming years.

APPENDIX

2010 INTERRUPTON REPORT

The 2010 Interruption Report





Office of Electricity, Gas, and Water

June 2011

June 2011

ATTACHMENT
Definitions and Explanations of Terms Used in the 2010
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2010**, customers served is the number of customers as of 12/31/2010. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2009.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	1.59	1.42	1.27	1.37	1.27	1.38
DURATION	2.58	2.43	2.47	2.22	2.42	2.43
CONED						
FREQUENCY	0.16	0.16	0.13	0.10	0.13	0.13
DURATION	8.23	1.97	2.27	2.27	2.57	3.46
LIPA *						
FREQUENCY	0.75	0.90	0.77	0.74	0.73	0.78
DURATION	1.37	1.20	1.36	1.17	1.11	1.24
NAT GRID						
FREQUENCY	1.01	0.96	0.75	0.88	0.80	0.88
DURATION	2.05	2.01	1.96	1.91	1.98	1.98
NYSEG						
FREQUENCY	1.12	1.20	1.11	1.08	1.14	1.13
DURATION	2.01	2.22	2.08	2.00	1.98	2.06
O&R						
FREQUENCY	1.23	1.03	1.19	1.03	1.21	1.14
DURATION	1.51	1.60	1.83	1.67	1.79	1.68
RG&E						
FREQUENCY	0.79	0.83	0.78	0.59	0.71	0.74
DURATION	1.78	1.73	1.85	1.80	1.71	1.77
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.00	1.02	0.88	0.90	0.89	0.94
DURATION	1.92	1.88	1.89	1.79	1.82	1.86
STATEWIDE (WITH CONED)						
FREQUENCY	0.65	0.65	0.56	0.56	0.57	0.60
DURATION	2.57	1.89	1.93	1.83	1.89	2.02

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	2.20	1.51	2.15	1.63	2.62	2.02
DURATION	4.12	2.51	5.76	2.48	10.94	5.16
CONED						
FREQUENCY	0.23	0.18	0.14	0.11	0.23	0.18
DURATION	12.31	3.12	2.71	3.06	15.05	7.25
LIPA *						
FREQUENCY	1.18	1.04	1.09	0.81	1.04	1.03
DURATION	1.99	1.37	1.65	1.25	1.84	1.62
NAT GRID						
FREQUENCY	1.48	1.31	1.37	1.01	0.98	1.23
DURATION	7.18	2.70	4.32	2.01	2.46	3.74
NYSEG						
FREQUENCY	1.79	1.71	2.14	1.47	1.84	1.79
DURATION	10.32	3.62	7.07	2.68	4.09	5.55
O&R						
FREQUENCY	1.81	1.17	1.64	1.15	1.79	1.51
DURATION	2.15	1.92	2.94	1.89	4.76	2.73
RG&E						
FREQUENCY	0.98	1.16	1.36	0.74	0.79	1.01
DURATION	2.14	1.80	3.77	2.03	2.18	2.38
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.49	1.31	1.51	1.07	1.29	1.34
DURATION	6.02	2.56	4.62	2.09	4.09	3.87
STATEWIDE (WITH CONED)						
FREQUENCY	0.96	0.83	0.93	0.67	0.84	0.85
DURATION	6.65	2.61	4.50	2.16	5.35	4.25

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	55,211	55,425	53,758	55,995	54,310	54,940
Number of Customer-Hours	8,439,916	8,439,464	7,399,179	7,116,848	7,197,156	7,718,512
Number of Customers Affected	4,400,072	4,495,428	3,910,426	3,976,492	3,962,829	4,149,049
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	1.92	1.88	1.89	1.79	1.82	1.86
Average Duration Per Customers Served	1.91	1.91	1.67	1.61	1.62	1.74
Interruptions Per 1000 Customers Served	12.52	12.51	12.12	12.65	12.24	12.41
Number of Customers Affected Per Customer Served (SAIFI)	1.00	1.02	0.88	0.90	0.89	0.94

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	65,752	66,746	65,403	70,930	68,221	67,410
Number of Customer-Hours	12,603,322	9,429,452	8,326,562	7,891,155	8,284,480	9,306,994
Number of Customers Affected	4,905,844	4,996,967	4,319,550	4,316,932	4,385,672	4,584,993
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	2.57	1.89	1.93	1.83	1.89	2.02
Average Duration Per Customers Served	1.66	1.23	1.08	1.03	1.07	1.21
Interruptions Per 1000 Customers Served	8.66	8.73	8.52	9.21	8.83	8.79
Number of Customers Affected Per Customer Served (SAIFI)	0.65	0.65	0.56	0.56	0.57	0.60

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	70,872	61,753	73,150	61,841	72,135	67,950
Number of Customer-Hours	39,413,242	14,848,512	30,962,269	9,923,723	23,466,391	23,722,827
Number of Customers Affected	6,548,910	5,808,516	6,705,414	4,752,148	5,741,806	5,911,359
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	6.02	2.56	4.62	2.09	4.09	3.87
Average Duration Per Customers Served	8.94	3.35	6.98	2.24	5.29	5.36
Interruptions Per 1000 Customers Served	16.08	13.94	16.50	13.97	16.25	15.35
Number of Customers Affected Per Customer Served (SAIFI)	1.49	1.31	1.51	1.07	1.29	1.34

STATEWIDE (WITH CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	86,734	74,261	85,548	77,181	91,471	83,039
Number of Customer-Hours	48,437,221	16,630,252	32,188,186	11,046,399	34,693,862	28,599,184
Number of Customers Affected	7,282,114	6,379,276	7,158,329	5,118,841	6,487,588	6,485,230
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	6.65	2.61	4.50	2.16	5.35	4.25
Average Duration Per Customers Served	6.38	2.17	4.19	1.44	4.49	3.73
Interruptions Per 1000 Customers Served	11.42	9.71	11.14	10.03	11.83	10.83
Number of Customers Affected Per Customer Served (SAIFI)	0.96	0.83	0.93	0.67	0.84	0.85

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

CENTRAL HUDSON
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	7,538	6,386	6,857	6,705	7,762	7,050
Number of Customer-Hours	1,201,109	1,021,859	933,993	910,250	922,392	997,921
Number of Customers Affected	464,765	420,769	377,564	410,516	380,489	410,821
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	2.58	2.43	2.47	2.22	2.42	2.43
Average Duration Per Customers Served	4.10	3.46	3.13	3.03	3.08	3.36
Interruptions Per 1000 Customers Served	25.74	21.62	22.98	22.30	25.91	23.71
Number of Customers Affected Per Customer Served (SAIFI)	1.59	1.42	1.27	1.37	1.27	1.38

CENTRAL HUDSON
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,066	6,681	9,887	7,609	11,994	9,247
Number of Customer-Hours	2,649,690	1,117,802	3,705,277	1,211,827	8,597,567	3,456,433
Number of Customers Affected	643,778	444,813	642,949	488,732	785,806	601,216
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	4.12	2.51	5.76	2.48	10.94	5.16
Average Duration Per Customers Served	9.05	3.78	12.42	4.03	28.70	11.60
Interruptions Per 1000 Customers Served	34.38	22.62	33.13	25.31	40.04	31.10
Number of Customers Affected Per Customer Served (SAIFI)	2.20	1.51	2.15	1.63	2.62	2.02

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,541	11,321	11,645	14,935	13,911	12,471
Number of Customer-Hours	4,163,407	989,988	927,383	774,307	1,087,325	1,588,482
Number of Customers Affected	505,772	501,539	409,124	340,440	422,843	435,944
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	8.23	1.97	2.27	2.27	2.57	3.46
Average Duration Per Customers Served	1.31	0.31	0.29	0.24	0.33	0.49
Interruptions Per 1000 Customers Served	3.31	3.52	3.59	4.56	4.23	3.84
Number of Customers Affected Per Customer Served (SAIFI)	0.16	0.16	0.13	0.10	0.13	0.13

CON ED (SYSTEM)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	15,862	12,508	12,398	15,340	19,336	15,089
Number of Customer-Hours	9,023,979	1,781,740	1,225,917	1,122,677	11,227,471	4,876,357
Number of Customers Affected	733,204	570,760	452,915	366,693	745,782	573,871
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	12.31	3.12	2.71	3.06	15.05	7.25
Average Duration Per Customers Served	2.83	0.55	0.38	0.34	3.41	1.50
Interruptions Per 1000 Customers Served	4.98	3.89	3.82	4.69	5.87	4.65
Number of Customers Affected Per Customer Served (SAIFI)	0.23	0.18	0.14	0.11	0.23	0.18

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	4,274	5,571	5,485	8,650	7,434	6,283
Number of Customer-Hours	2,947,306	316,477	252,964	273,705	370,405	832,171
Number of Customers Affected	48,467	176,430	40,301	52,994	54,555	74,549
Number of Customers Served	2,363,897	2,361,145	2,385,760	2,403,818	2,439,565	2,390,837
Average Duration Per Customer Affected (CAIDI)	60.81	1.79	6.28	5.16	6.79	16.17
Average Duration Per Customers Served	1.26	0.13	0.11	0.11	0.15	0.35
Interruptions Per 1000 Customers Served	1.83	2.36	2.32	3.63	3.09	2.64
Number of Customers Affected Per Customer Served (SAIFI)	0.021	0.075	0.017	0.022	0.023	0.031

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (RADIAL)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	6,267	5,750	6,160	6,285	6,477	6,188
Number of Customer-Hours	1,216,101	673,511	674,419	500,602	716,920	756,310
Number of Customers Affected	457,305	325,109	368,823	287,446	368,288	361,394
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	2.66	2.07	1.83	1.74	1.95	2.05
Average Duration Per Customers Served	1.43	0.79	0.76	0.57	0.81	0.87
Interruptions Per 1000 Customers Served	7.39	6.73	6.97	7.09	7.29	7.10
Number of Customers Affected Per Customer Served (SAIFI)	0.54	0.38	0.42	0.32	0.41	0.42

CON ED (RADIAL)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	11,588	6,937	6,913	6,690	11,902	8,806
Number of Customer-Hours	6,076,673	1,465,264	972,954	848,971	10,857,066	4,044,185
Number of Customers Affected	684,737	394,330	412,614	313,699	691,227	499,321
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	8.87	3.72	2.36	2.71	15.71	6.67
Average Duration Per Customers Served	7.17	1.71	1.10	0.96	12.23	4.63
Interruptions Per 1000 Customers Served	13.67	8.12	7.82	7.55	13.40	10.11
Number of Customers Affected Per Customer Served (SAIFI)	0.81	0.46	0.47	0.35	0.78	0.57

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

LIPA
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	18,634	18,736	18,135	17,795	17,180	18,096
Number of Customer-Hours	1,129,275	1,190,411	1,166,613	958,679	905,031	1,070,002
Number of Customers Affected	823,396	995,077	856,405	821,723	811,969	861,714
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.37	1.20	1.36	1.17	1.11	1.24
Average Duration Per Customers Served	1.03	1.08	1.05	0.86	0.81	0.97
Interruptions Per 1000 Customers Served	16.99	16.98	16.36	16.02	15.41	16.35
Number of Customers Affected Per Customer Served (SAIFI)	0.75	0.90	0.77	0.74	0.73	0.78

LIPA
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	24,905	20,077	20,471	19,003	22,867	21,465
Number of Customer-Hours	2,564,134	1,564,559	1,998,270	1,121,723	2,125,507	1,874,839
Number of Customers Affected	1,289,698	1,142,365	1,208,292	894,595	1,153,884	1,137,767
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.99	1.37	1.65	1.25	1.84	1.62
Average Duration Per Customers Served	2.34	1.42	1.80	1.01	1.91	1.70
Interruptions Per 1000 Customers Served	22.71	18.20	18.47	17.11	20.51	19.40
Number of Customers Affected Per Customer Served (SAIFI)	1.18	1.04	1.09	0.81	1.04	1.03

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NATIONAL GRID
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	13,665	14,606	12,939	15,915	13,822	14,189
Number of Customer-Hours	3,289,340	3,045,363	2,334,754	2,645,775	2,529,126	2,768,872
Number of Customers Affected	1,607,461	1,518,634	1,188,585	1,387,131	1,277,727	1,395,908
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98
Average Duration Per Customers Served	2.07	1.92	1.46	1.67	1.59	1.74
Interruptions Per 1000 Customers Served	8.62	9.19	8.12	10.05	8.69	8.93
Number of Customers Affected Per Customer Served (SAIFI)	1.01	0.96	0.75	0.88	0.80	0.88

NATIONAL GRID
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	16,279	16,222	18,301	17,060	15,571	16,687
Number of Customer-Hours	16,813,162	5,605,931	9,410,833	3,214,148	3,824,438	7,773,703
Number of Customers Affected	2,341,235	2,075,480	2,177,786	1,599,090	1,553,727	1,949,464
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	7.18	2.70	4.32	2.01	2.46	3.74
Average Duration Per Customers Served	10.61	3.53	5.90	2.03	2.41	4.89
Interruptions Per 1000 Customers Served	10.27	10.20	11.48	10.77	9.79	10.50
Number of Customers Affected Per Customer Served (SAIFI)	1.48	1.31	1.37	1.01	0.98	1.23

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NYSEG
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	9,682	10,317	10,027	9,643	9,777	9,889
Number of Customer-Hours	1,913,315	2,299,142	1,980,213	1,848,599	1,934,747	1,995,203
Number of Customers Affected	953,941	1,034,113	953,105	922,448	975,375	967,796
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06
Average Duration Per Customers Served	2.24	2.68	2.30	2.16	2.25	2.32
Interruptions Per 1000 Customers Served	11.33	12.00	11.66	11.25	11.39	11.52
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13

NYSEG
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	12,835	12,928	17,008	11,948	14,976	13,939
Number of Customer-Hours	15,787,602	5,314,914	12,974,501	3,369,824	6,445,599	8,778,488
Number of Customers Affected	1,529,247	1,469,825	1,836,251	1,257,464	1,576,105	1,533,778
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	10.32	3.62	7.07	2.68	4.09	5.55
Average Duration Per Customers Served	18.48	6.18	15.09	3.93	7.51	10.24
Interruptions Per 1000 Customers Served	15.02	15.04	19.78	13.93	17.44	16.24
Number of Customers Affected Per Customer Served (SAIFI)	1.79	1.71	2.14	1.47	1.84	1.79

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

O&R
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	2,688	2,596	2,993	2,987	2,897	2,832
Number of Customer-Hours	397,977	356,514	470,431	375,064	472,939	414,585
Number of Customers Affected	264,121	222,895	256,943	223,976	263,752	246,337
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	1.51	1.60	1.83	1.67	1.79	1.68
Average Duration Per Customers Served	1.85	1.65	2.18	1.73	2.17	1.92
Interruptions Per 1000 Customers Served	12.53	12.00	13.88	13.74	13.30	13.09
Number of Customers Affected Per Customer Served (SAIFI)	1.23	1.03	1.19	1.03	1.21	1.14

O&R
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,546	2,738	3,655	3,111	3,646	3,339
Number of Customer-Hours	836,046	483,938	1,043,235	471,941	1,857,491	938,530
Number of Customers Affected	388,164	252,650	354,315	249,064	389,937	326,826
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	2.15	1.92	2.94	1.89	4.76	2.73
Average Duration Per Customers Served	3.90	2.24	4.84	2.17	8.53	4.33
Interruptions Per 1000 Customers Served	16.53	12.66	16.95	14.31	16.73	15.44
Number of Customers Affected Per Customer Served (SAIFI)	1.81	1.17	1.64	1.15	1.79	1.51

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

RG&E
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,004	2,784	2,807	2,950	2,872	2,883
Number of Customer-Hours	508,899	526,175	513,175	378,481	432,921	471,930
Number of Customers Affected	286,388	303,940	277,824	210,698	253,517	266,473
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77
Average Duration Per Customers Served	1.40	1.44	1.44	1.06	1.21	1.31
Interruptions Per 1000 Customers Served	8.24	7.63	7.86	8.28	8.04	8.01
Number of Customers Affected Per Customer Served (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74

RG&E
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,241	3,107	3,828	3,110	3,081	3,273
Number of Customer-Hours	762,609	761,368	1,830,153	534,259	615,789	900,835
Number of Customers Affected	356,788	423,383	485,821	263,203	282,347	362,308
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	2.14	1.80	3.77	2.03	2.18	2.38
Average Duration Per Customers Served	2.09	2.09	5.12	1.50	1.72	2.51
Interruptions Per 1000 Customers Served	8.89	8.52	10.72	8.73	8.63	9.10
Number of Customers Affected Per Customer Served (SAIFI)	0.98	1.16	1.36	0.74	0.79	1.01

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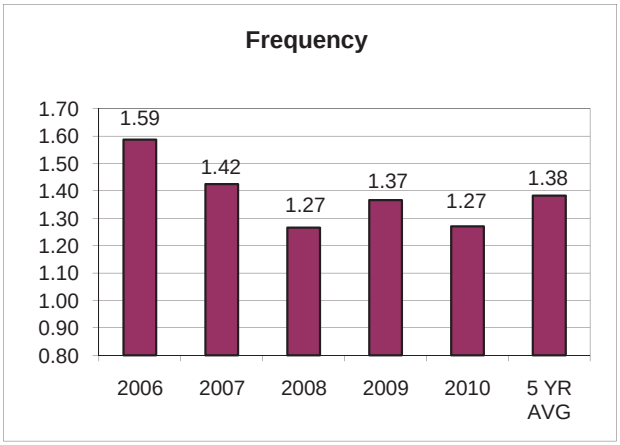
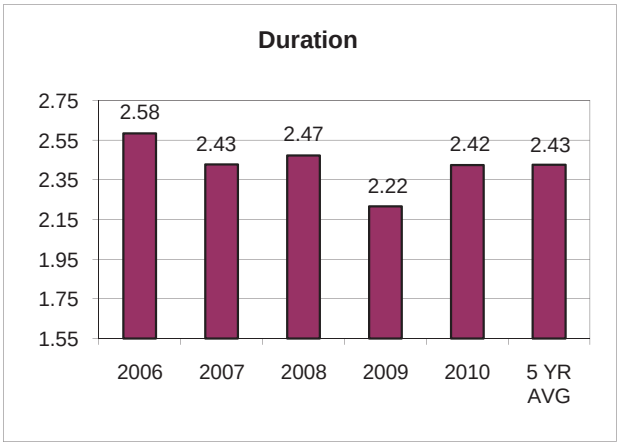
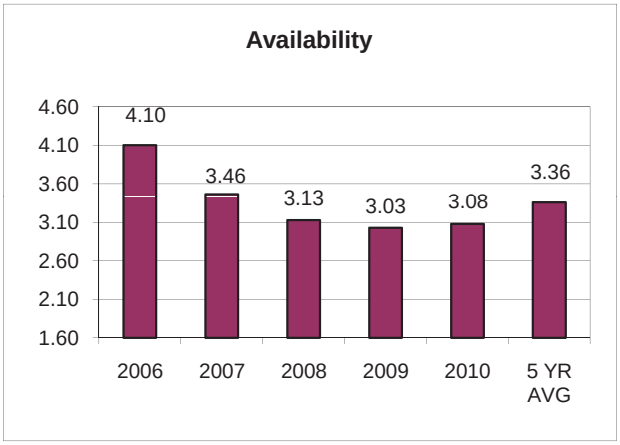
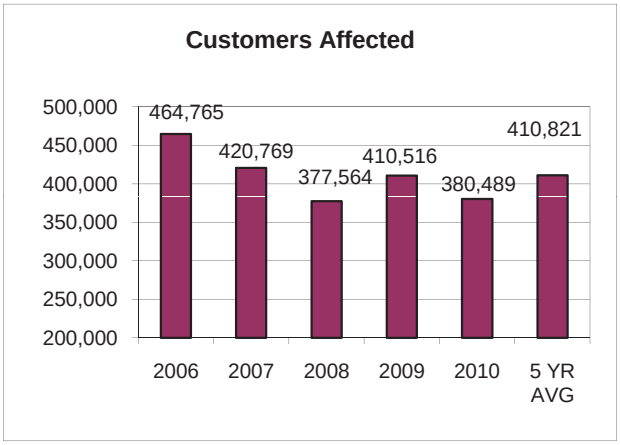
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

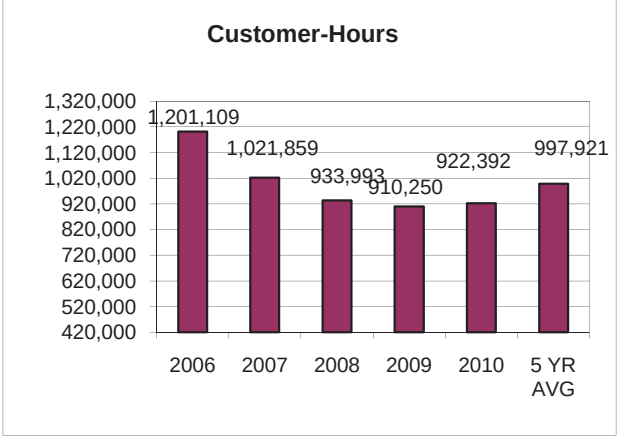
Central Hudson Gas and Electric
(Excluding Major Storms)

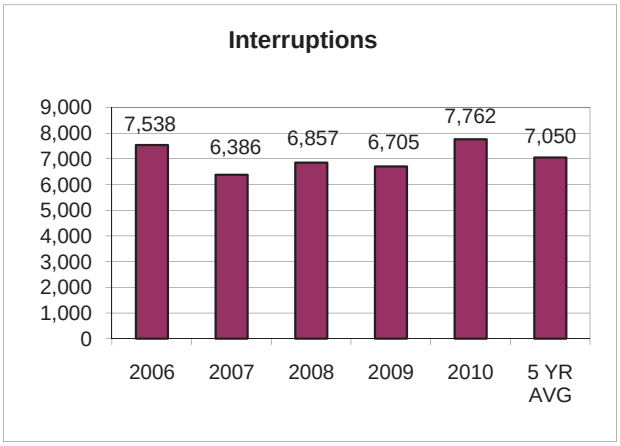




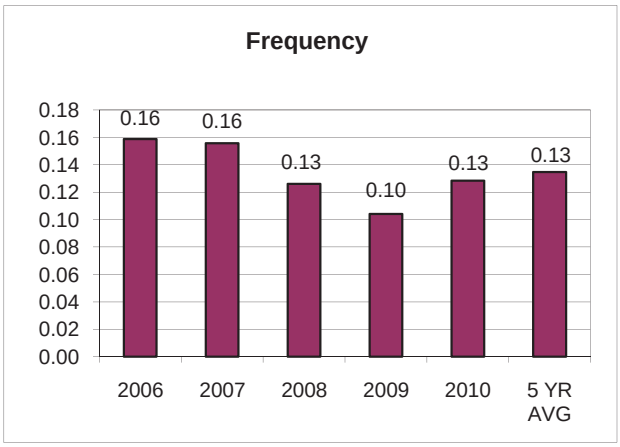


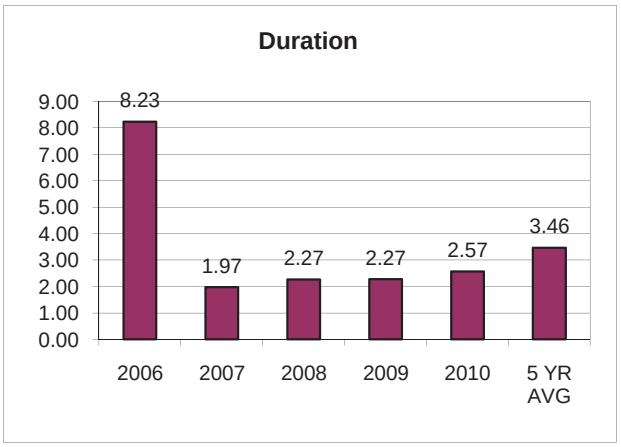


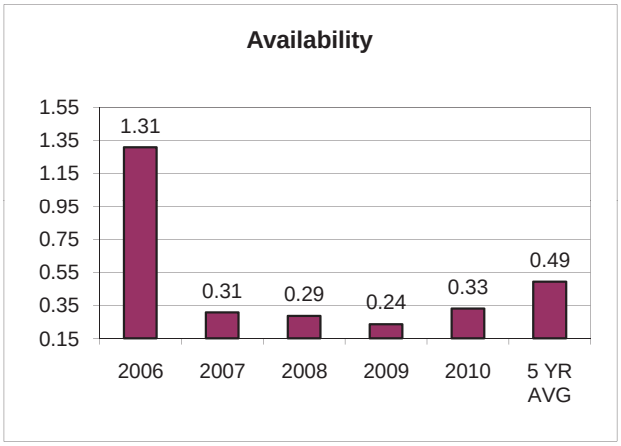


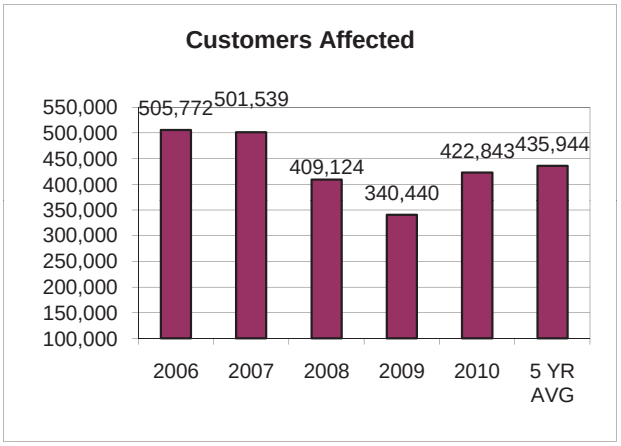


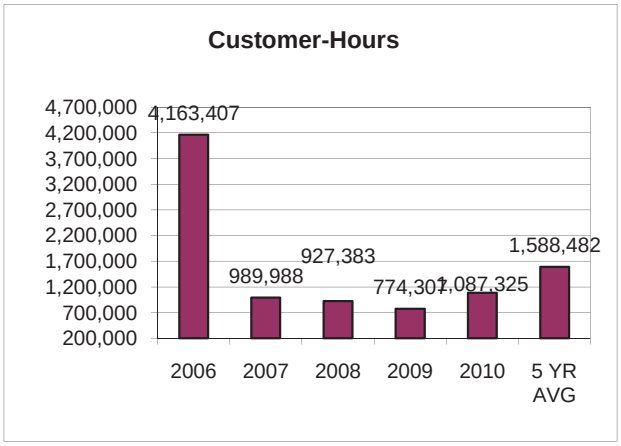
Consolidated Edison - System
(Excluding Major Storms)

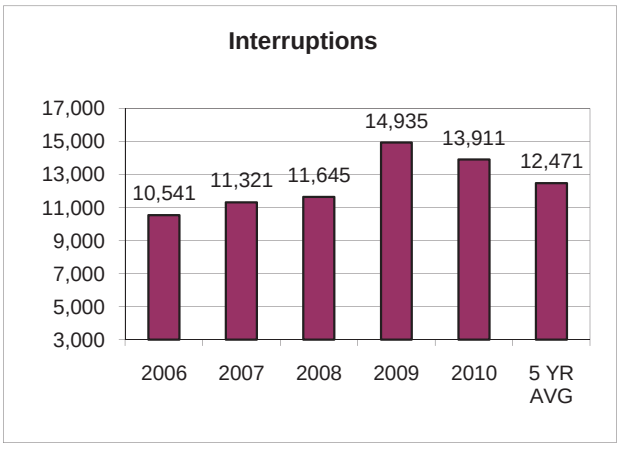




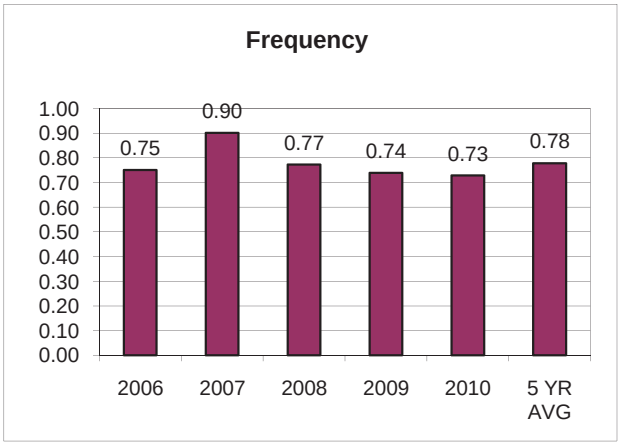


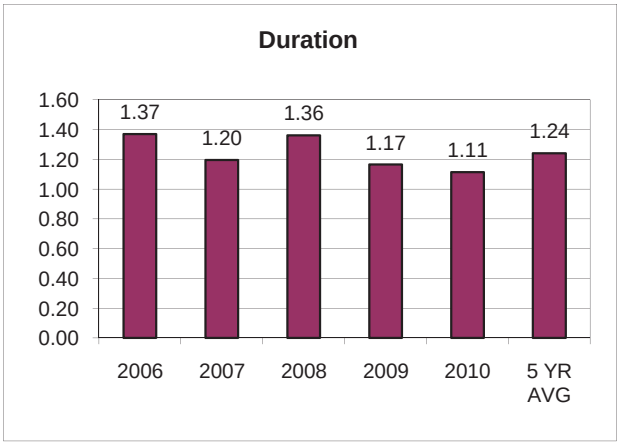


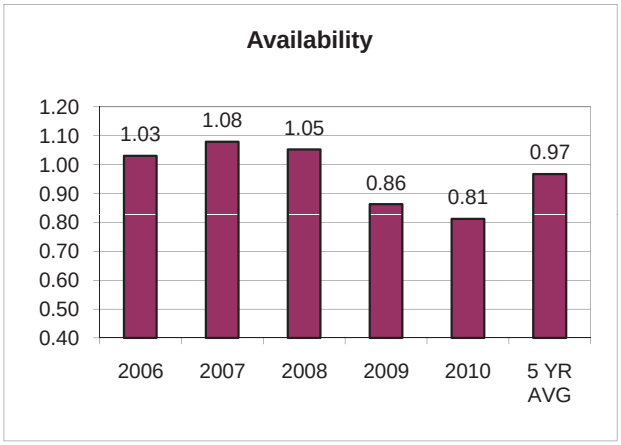


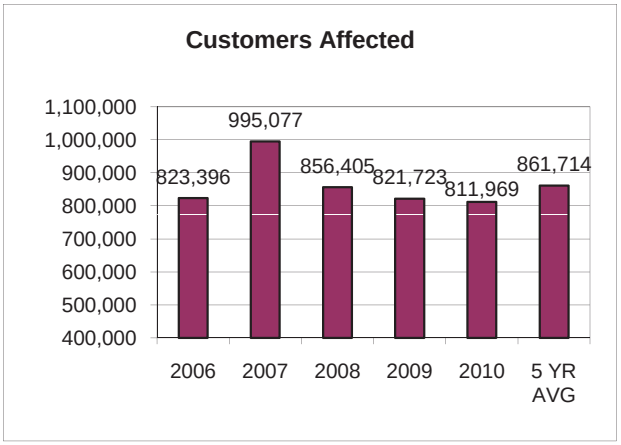


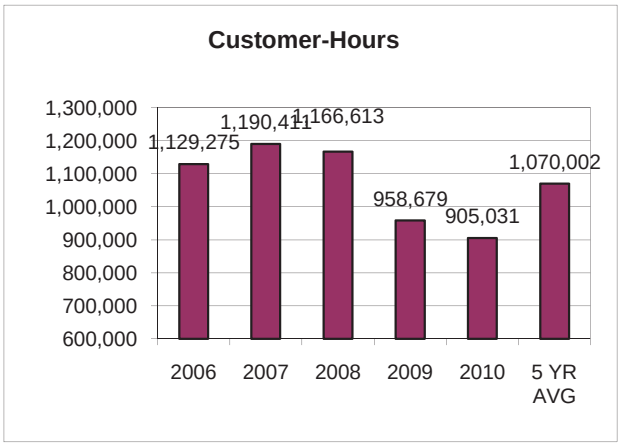
Long Island Power Authority
(Excluding Major Storms)

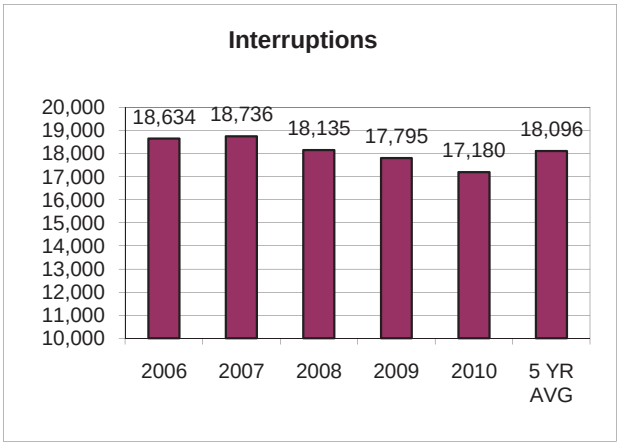






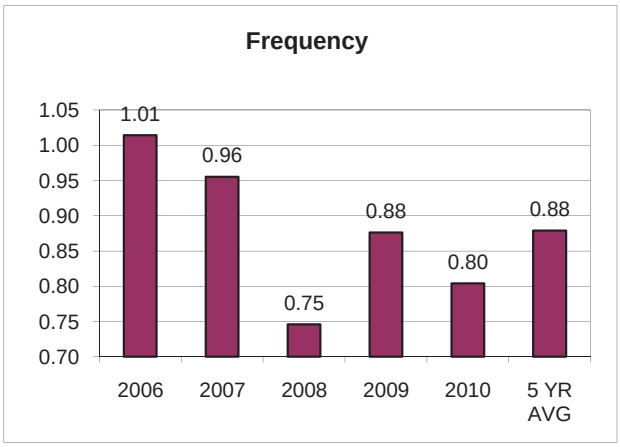


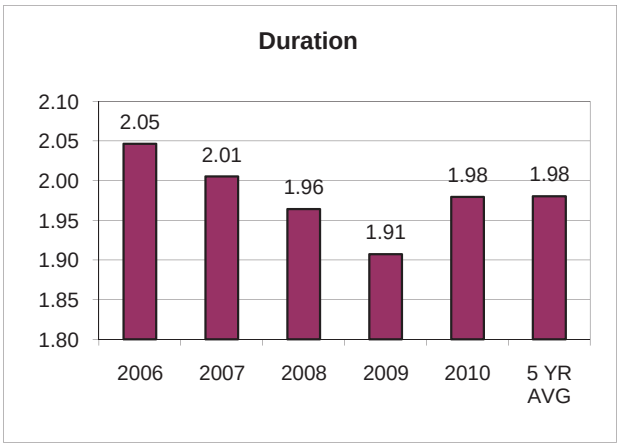


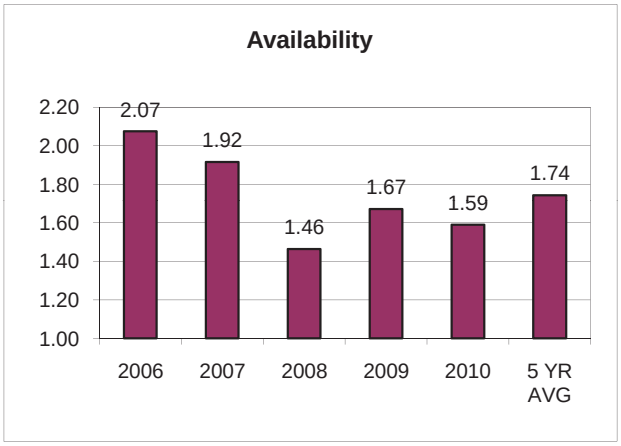


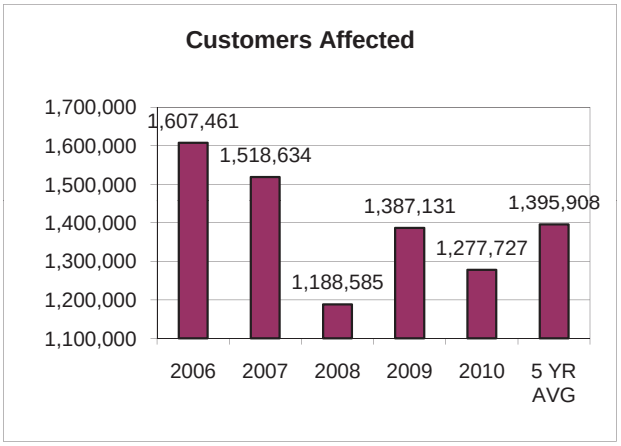
* LIPA is not regulated by the NYS PSC.

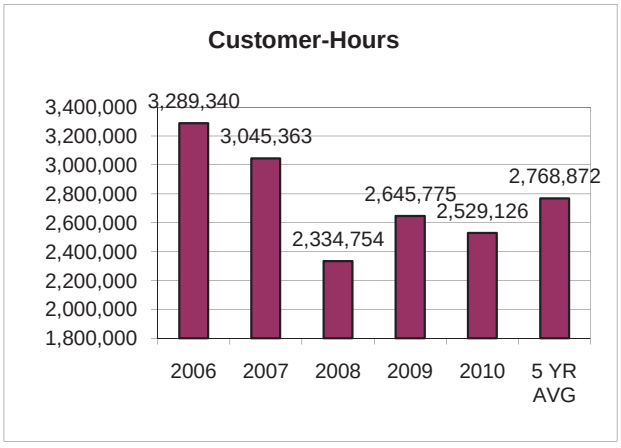
National Grid
(Excluding Major Storms)

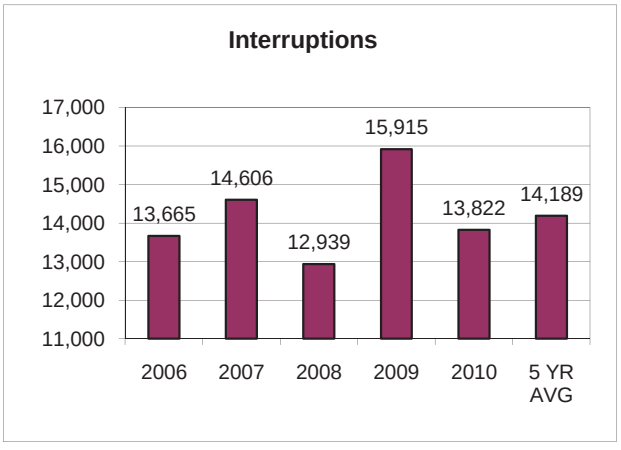




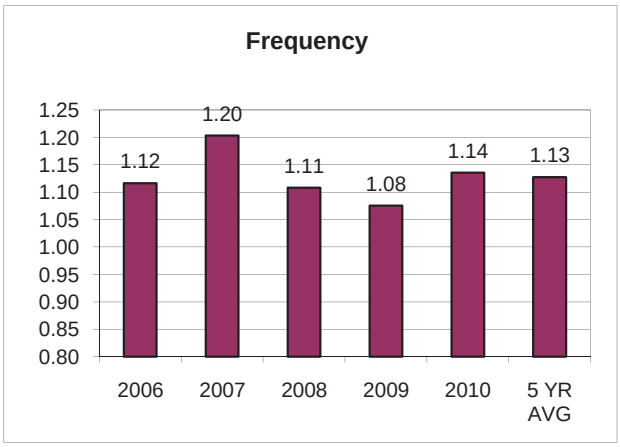


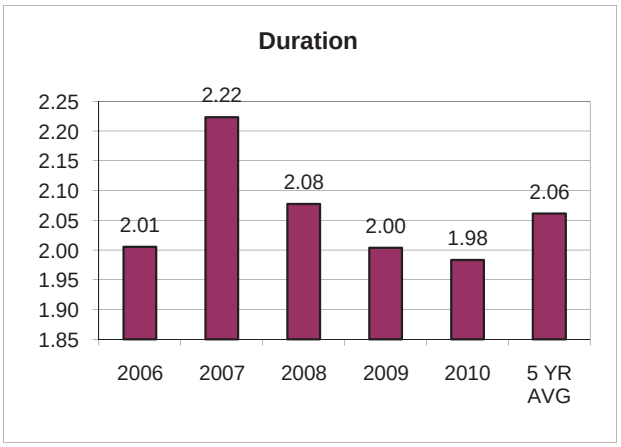


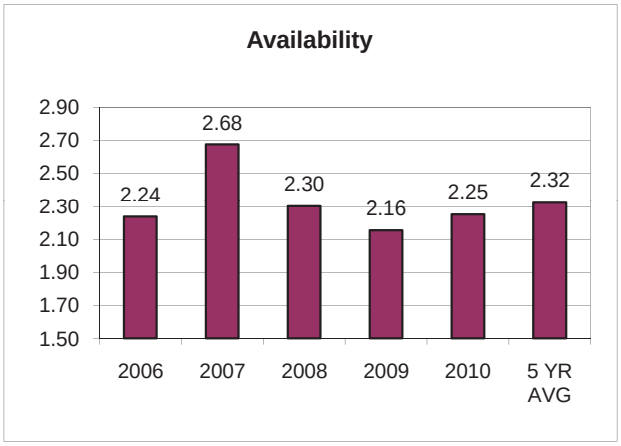


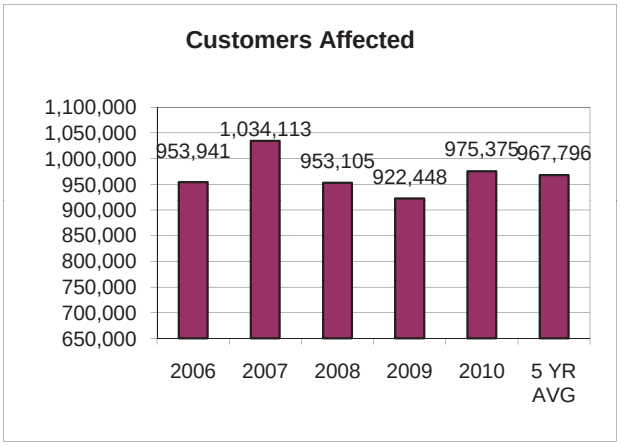


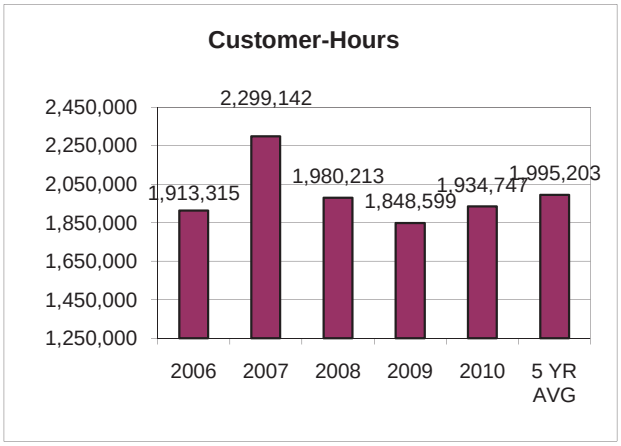
New York State Electric and Gas
(Excluding Major Storms)

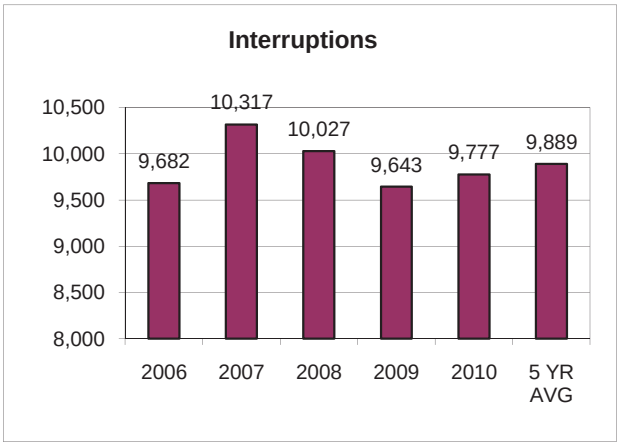




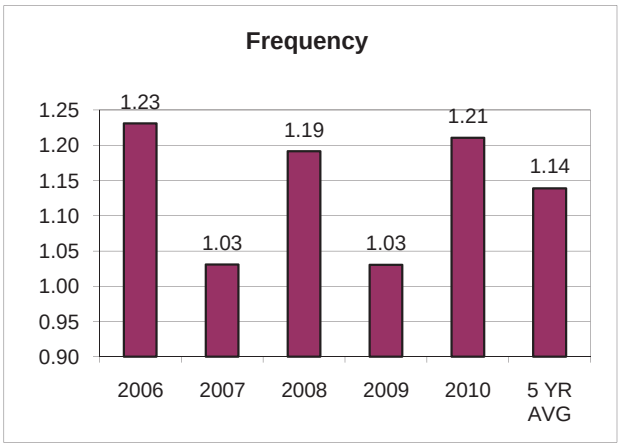


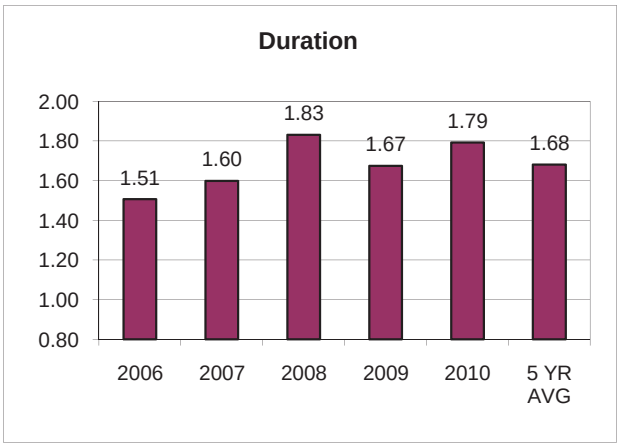


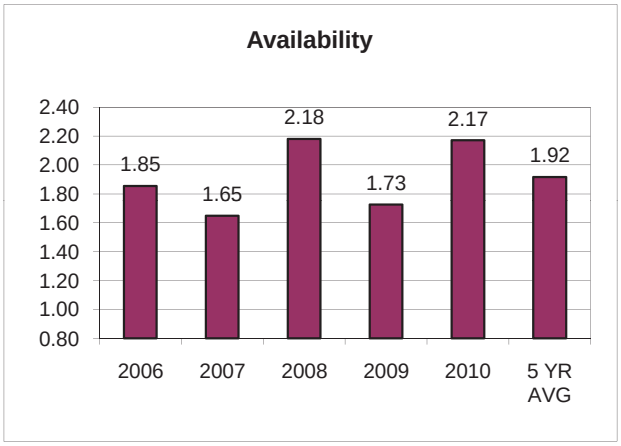


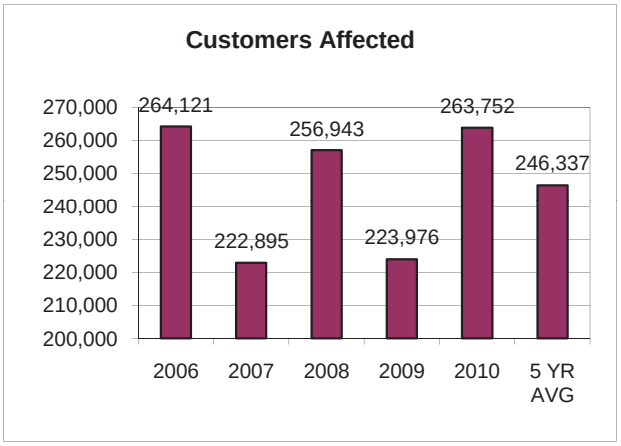


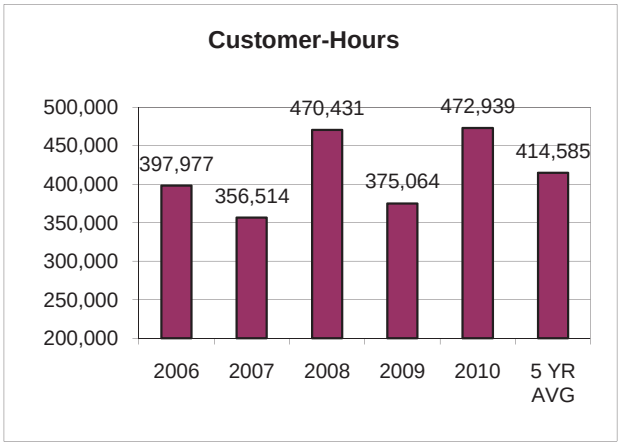
Orange and Rockland Utilities
(Excluding Major Storms)

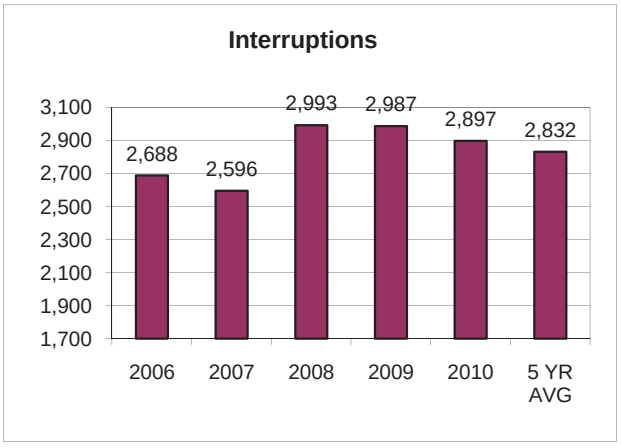












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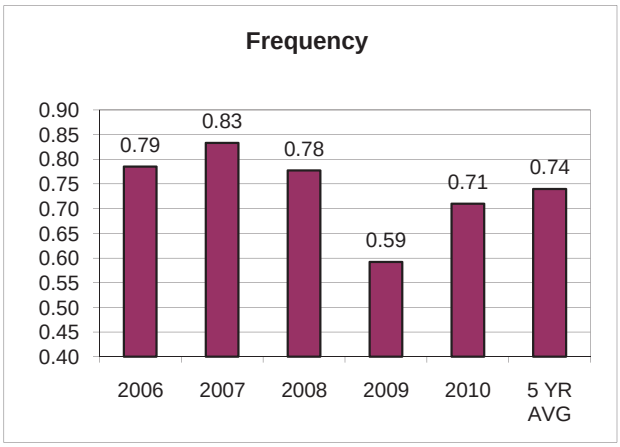
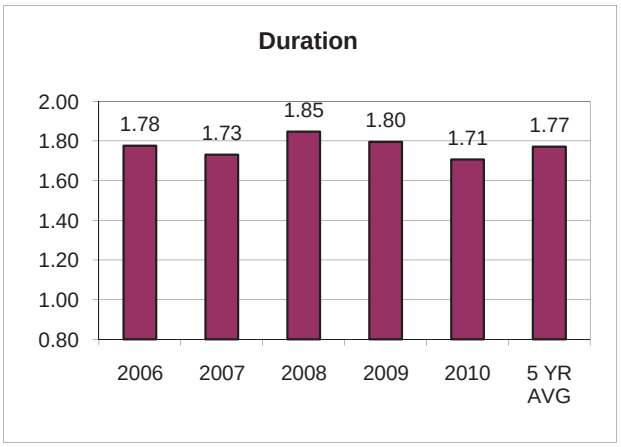
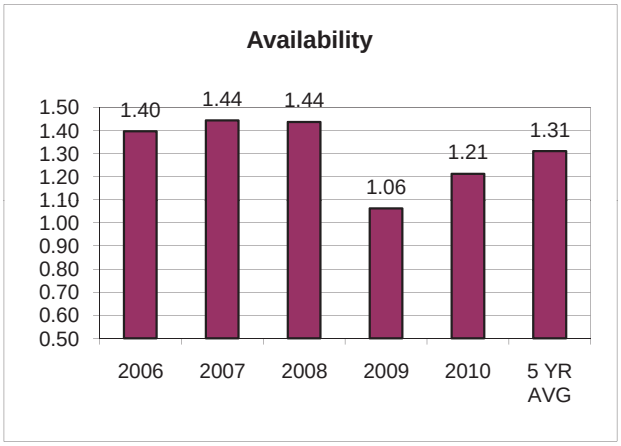
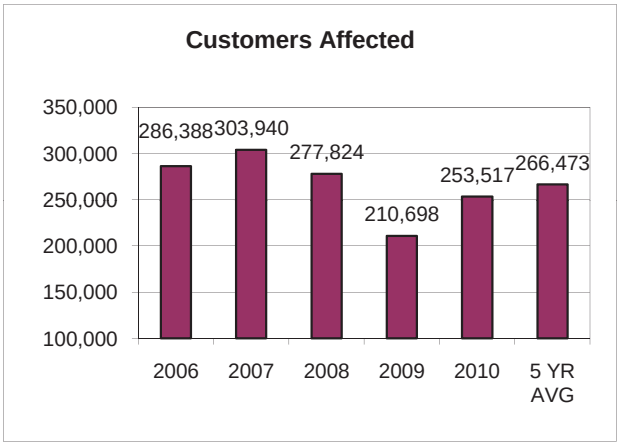
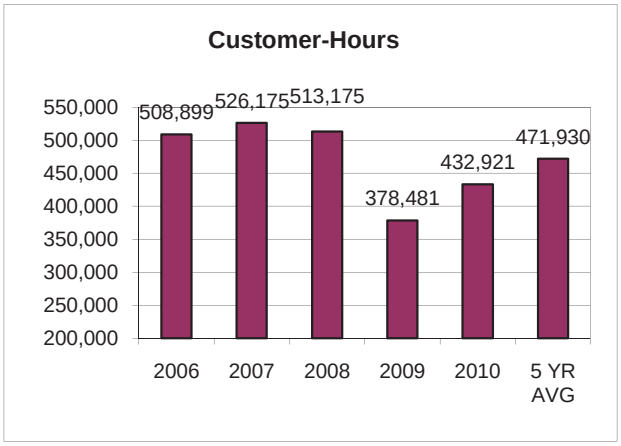
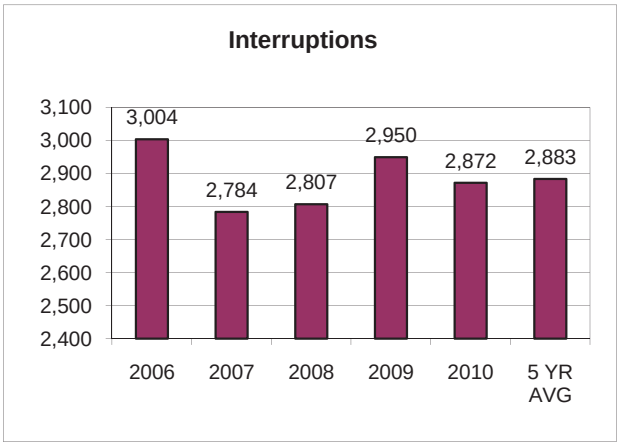






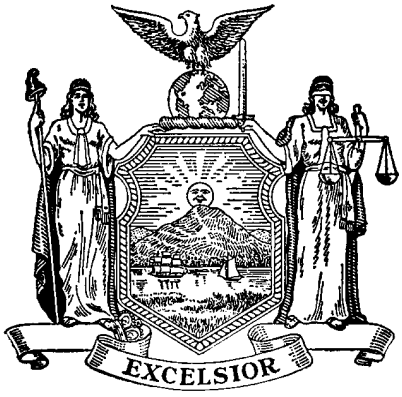






STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2008 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2009

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EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State. As a means of monitoring the levels of service, utilities are required to submit detailed interruption data to the Public Service Commission (Commission). Staff relies on two primary metrics to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] By compiling the results of individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State.

The statewide interruption frequency for 2008, excluding major storms, was considerably better than that recorded in 2007, where all companies except Orange and Rockland Utilities, Inc. (Orange and Rockland) showed improvement. The statewide duration in 2008 was slightly worse than in 2007. The year 2008 was the second-most affected by storms in five years and had 35 more storms than in 2007. Staff attributes some of the 2008 improvement in frequency to the high number of major storms (excludable events). Typical weather patterns result in less severe weather that lead to minor storms, which are included in the measures and thereby increase performance measures. Similar overall patterns exist for frequency and duration when analyzing the reliability data excluding Consolidated Edison Company of New York, Inc (Con Edison) performances.[2]

With respect to individual utilities' performances in 2008, Central Hudson Gas and Electric Corporation (Central Hudson), Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) and Rochester Gas and Electric Corporation (RG&E) performed at, or better than, their historic levels. Infrastructure improvements

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] Con Edison's system includes many large, highly concentrated distribution networks. As a result, its interruption frequency is extremely low as compared to other utilities' interruption frequency and typically skews aggregated data measurements. Therefore, Staff examines statewide statistics both including and excluding Con Edison's data.

associated with National Grid's commitment to invest $1.47 billion over a five year period appears to positively affect its reliability performance.[3] Additionally, Central Hudson's revised tree trimming program seems to be helping in reducing tree caused interruptions. In 2008, Orange and Rockland was not as good as its 2007 performance for both frequency (slight change) and duration. Orange and Rockland attributes its change in duration to the installation of distribution automation; Staff is currently investigating the relationship between distribution automation and duration.

Con Edison performed satisfactorily on its radial system for both frequency and duration, and better than previous year with respect to its network frequency. The Company's performance in 2008 for network duration, however, was significantly worse than its historic performance. Based on a self-assessment conducted in response to Staff's report for 2007Con Edison identified strategies to improve its performance and is implementing several pilot programs this summer. It also formed a task force to continue to identify means to improve performances, especially on it network system. The programs involve predictive outage modeling, improvements to assist in crew allocation and deployment in order to improve both network and radial outage durations. In order to evaluate the effectiveness of Con Edison's actions, Staff is recommending that the Company file a report of the task force findings and results from its pilot programs by September 15, 2009. Staff is also recommending Con Edison perform a self-assessment to identify actions to improve its network duration performance and file the self-assessment with Staff by September 15, 2009.

Although NYSEG's overall reliability statistics improved compared with 2007, its performance with respect to tree related outages continues to decline. In last year's reliability report, Staff recommended NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. The continued decline in performance with respect to tree related interruptions is not surprising because the Company's self-

[3] Case 06-M-0878, Joint Petition of National Grid PLC and KeySpan Corporation for Approval of Stock Acquisition and other Regulatory Authorizations.

assessment showed approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. NYSEG's decision to reduce its tree trimming activities and expenditures despite declining performance in this area needs to be examined in detail and will be the focus of a newly established Case 09-E-0472.[4]

Electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The reliability performance mechanisms are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets.[5] In 2008, Con Edison failed to achieve the duration target in its reliability performance mechanism for the network component of its distribution system and Orange and Rockland failed to achieve the duration target in its reliability performance mechanism for 2008. Combined, these failures resulted in about $5.4 million in negative revenue adjustments.

This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water. Con Edison is expected to comply with the recommendations and submit documentation by the dates indicated in the report.

[4] Case 09-E-0472, In the Matter of Investigation of New York State Electric and Gas Corporation Expenditures Related to its Line Clearance Programs.

[5] NYSEG was the only utility not under an RPM in 2007 and 2008 because its mechanism expired in 2006. A new RPM is in place for the Company's 2009 performance.

INTRODUCTION

The following report is an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service quality, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission about electric service interruptions on a monthly basis.[6] Using the data, Staff calculates two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information provided is also subdivided into 10 categories that reflect the nature of the cause of interruption (cause code).[7] By doing so, analysis of the cause code data can be used to highlight areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, devices could be installed on that circuit to try to minimize the problem. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which allows it to observe trends.

In addition, the Commission adopted standards addressing the reliability of electric service by establishing minimum acceptable levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31st of every year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause codes cover events not typically in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

feeders. There are no revenue adjustments for failure to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report.[9] The service standards were last revised in 2004.

Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more.[10] Major storm interruptions are excluded from the data when calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Performance inclusive of major storms shows the actual customer experience during a year.

[9] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

[10] Major storms do not include heat-related service interruptions.

2008 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities. Each year, Staff also prepares an Interruption Report summarizing the monthly interruption data submitted by the utilities. The 2008 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2008 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2008 and indicates company-specific trends where applicable.

In addition, performances are compared to utilities' reliability performance mechanisms (RPMs) placed into effect as part of their rate orders. The reliability performance mechanisms are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The targets are based on the indices used by the Commission's electric service standards.

Con Edison and Orange and Rockland each failed to achieve a target in their reliability performance mechanisms for 2008. Con Edison failed to achieve the duration target for its network system, resulting in a potential negative rate adjustment of $5 million.[11] Orange and Rockland failed to achieve its duration target, which results in a negative revenue adjustment of approximately $400,000.

STATEWIDE

For many years, Staff has been combining the individual utility performances into overall statewide statistics. By doing so, we evaluate the level of reliability provided and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks, its interruption frequency is

[11] This rate adjustment is a preliminary assessment based on Con Edison's March 31, 2009 filing that detailed the Company's compliance with its RPM. Con Edison's rate adjustment has not been presented to the Commission for final action.

extremely low as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, we examine and present aggregated data including and excluding Con Edison's data.

Statewide, the frequency of interruptions when excluding major storms was 0.56 in 2008, which is considerably better than the five-year average of 0.63 and better than 2007's performance level of 0.65. All companies, except Orange and Rockland, had fewer customers affected by power outages, again when major storms are excluded, as shown in Figure 1. This improvement is amplified when Con Edison is excluded with the frequency performance for 2008 at 0.88, which is considerably better than the five-year average of 0.98.

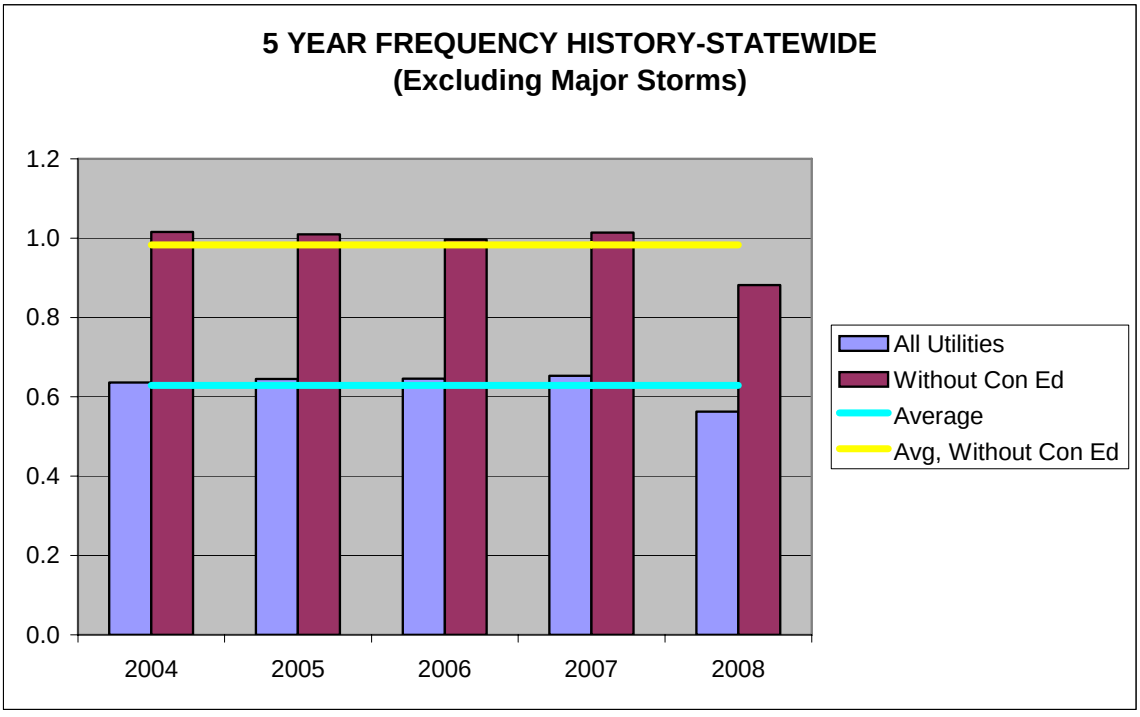

Figure 1: Statewide Frequency Performance

Figure 2 shows the statewide duration index for 2008, excluding major storms. The overall statewide duration index continues to be at a more normal level of 1.93 hours, as compared with 1.95 hours and 1.89 hours in 2005 and 2007, respectively. Con Edison's Long Island City network outages greatly affected the statewide duration in 2006. The statewide duration index, excluding Con Edison, was 1.89 hours in 2008, which is slightly better than 2007 and equal to the five-year average.

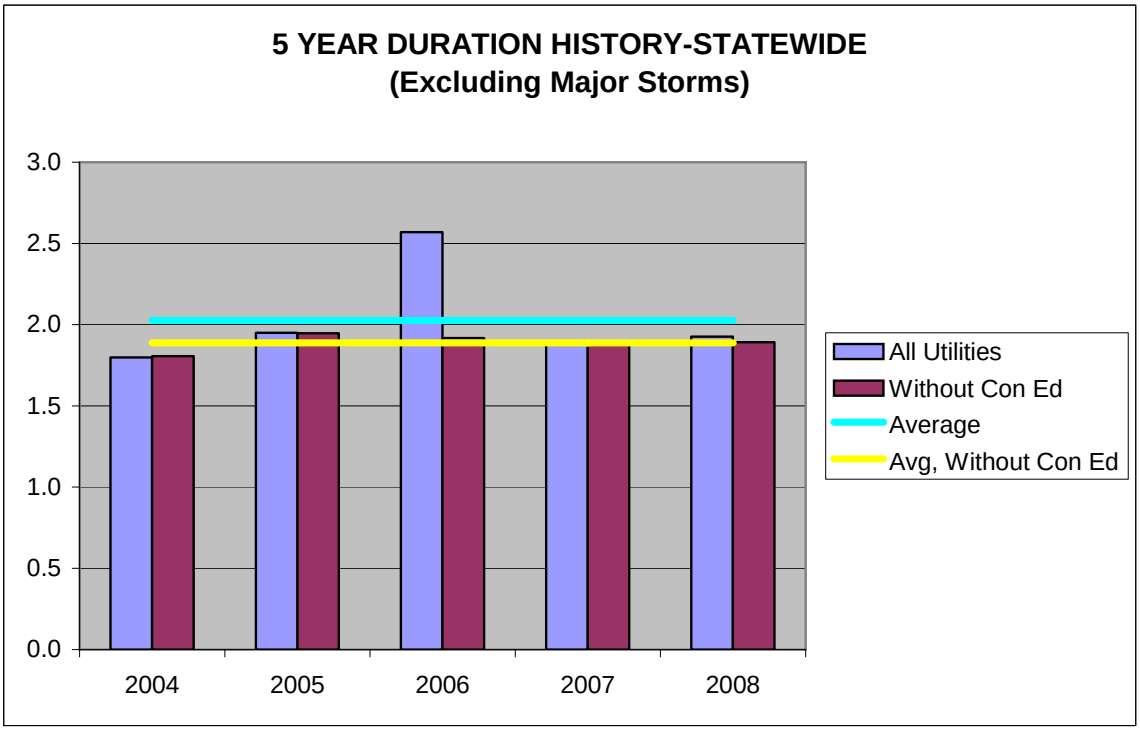

Figure 2: Statewide Duration Performance

In 2008, the weather during the winter and summer months was relatively severe, while there was a moderate amount of adverse weather activities in the spring. This pattern was apparent as numerous winter storms occurred during the early part of the year, culminating in a severe ice storm which significantly affected the Capital Region and Mid-Hudson in December 2008. Several fronts that traversed the State in June and July brought severe storms and/or damaging winds. In general, wind speeds and gusts were higher in 2008 than in prior years; National Grid reported the number of days with winds exceeding 30 miles per hour was 20% higher than the annual norm, and nearly twice the norm in two of its service areas. As a result, the total number of major

storms experienced by utilities increased by 35 storms over last year (Table 1, below). National Grid and NYSEG each experienced more than 20 major storms in 2008.

Table 1: Major Storms in 2008

Company	2007	2008	Change in Major Storms
Con Edison	4	4	0
National Grid	10	24	+14
NYSEG	17	25	+8
RG&E	10	12	+2
Central Hudson	5	9	+4
Orange and Rockland	1	8	+7
Total	**47**	**82**	**+35**

The year 2008 was the second-worst year for severe weather effects in the last five years (Figure 3, below).[12] When including major storms, the 2008 statewide frequency and duration performances were 0.93 and 4.50, respectively. When excluding Con Edison, the 2008 statewide frequency and duration performances including major storms were 1.51 and 4.62, respectively. All four of these measures were worse than the five-year averages. Major storms in 2008 accounted for 71% of the overall customer-hours of interruptions and 39% of the overall number of customers affected.

[12] The Buffalo area experienced a massive ice storm in 2006.

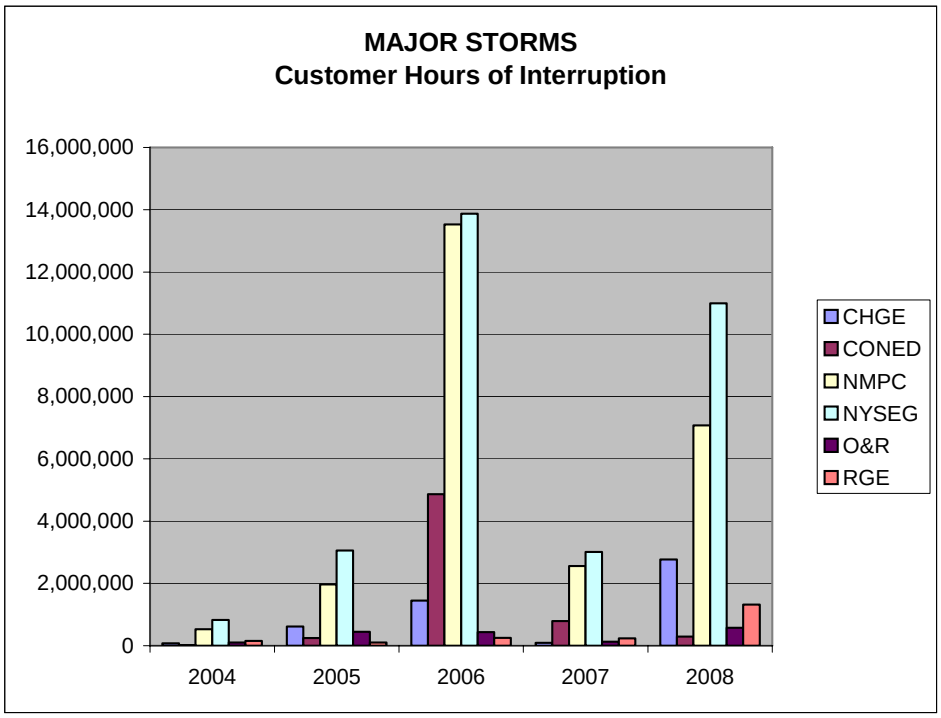

Figure 3: Major Storm Customer Hours

New York State investor-owned electric utilities must submit a report to the Commission addressing all facets of their restoration effort if the restoration period associated with significant storms lasts more than three days.[13] Overall, the utilities responded well to the major storms in 2008, restoring most customers affected within 24-72 hours from the end of a storm. In 2008, there were four reports submitted on major storms as listed in Table 2, below. These storms, especially the December ice storm, as well as the numerous other major storms mentioned earlier, had a greater than historic effect on the total number of hours that customers were without service.

Table 2: Storm reports filed in 2008

Date	Company	Areas Affected	Reason for Interruptions
October	NYSEG	Oneonta, Liberty	Wind and Snow Storm
December	Central Hudson, NYSEG, GRID	Capital District & Troy area	Ice Storm

CON EDISON

[13] 16 NYCRR Part 97, Part 105.4

Table 3: Con Edison's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Network Systems						
Frequency (SAIFI)	0.005	0.006	**0.021**	**0.075**	0.017	0.025
Duration (CAIDI)	3.64	**4.44**	**60.81**	1.79	**6.28**	15.39
Radial System						
Frequency (SAIFI)	0.39	0.51	**0.54**	0.38	0.42	0.45
Duration (CAIDI)	1.64	**1.91**	**2.66**	**2.07**	1.83	2.02

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Con Edison serves approximately 3.2 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

In 2008, the network frequency performances were significantly lower than its historical performances in 2006 and 2007. The Company radial frequency was slightly higher than in 2007 but lower than the five year average. In 2008, the Con Edison spent $562 million to improve the reliability on its electric system including $352 million on relief programs, $122 million on reliability programs, and $88 million on maintenance programs. In 2007 and 2008, the Company expanded its tree trimming budget and has seen a reduction in the number of interruption caused by trees as compared with previous years.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design criteria and underground settings, the majority of interruptions (85%) are associated with the service portion of the network system, as shown in Figure 4. Equipment failures are the second highest (7%) cause for interruptions in 2008. Failures on parts of the network grid itself (secondary feeders or mains) are the third highest cause for interruptions at 6%.

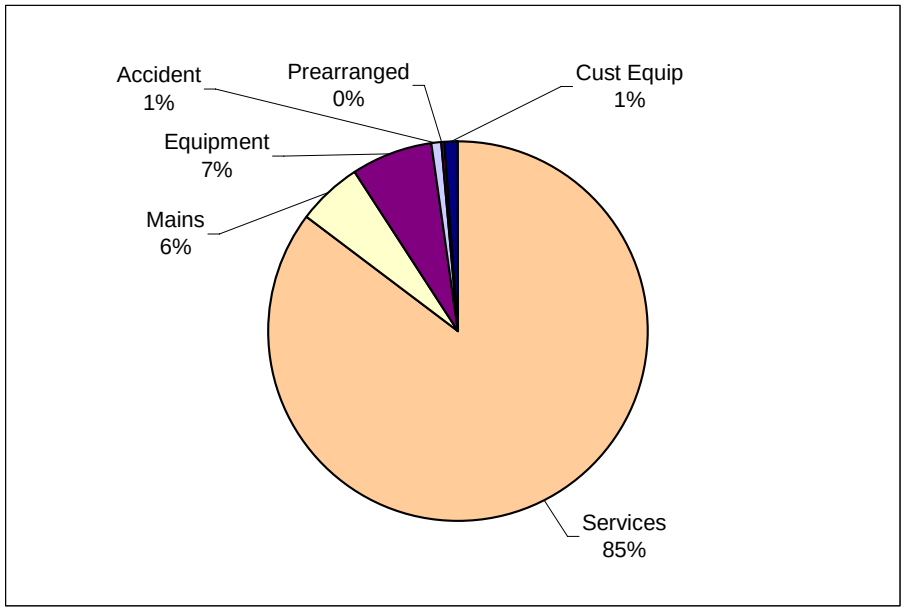

Figure 4: Con Edison's 2008 Network Interruptions by Cause

On its radial system, Con Edison's performance in 2008 was better than the five year average for both frequency and duration. Equipment failures are responsible for 71% of the interruptions on the radial system, followed by trees and accidents at 14% and 8%, respectively, as shown in Figure 5.

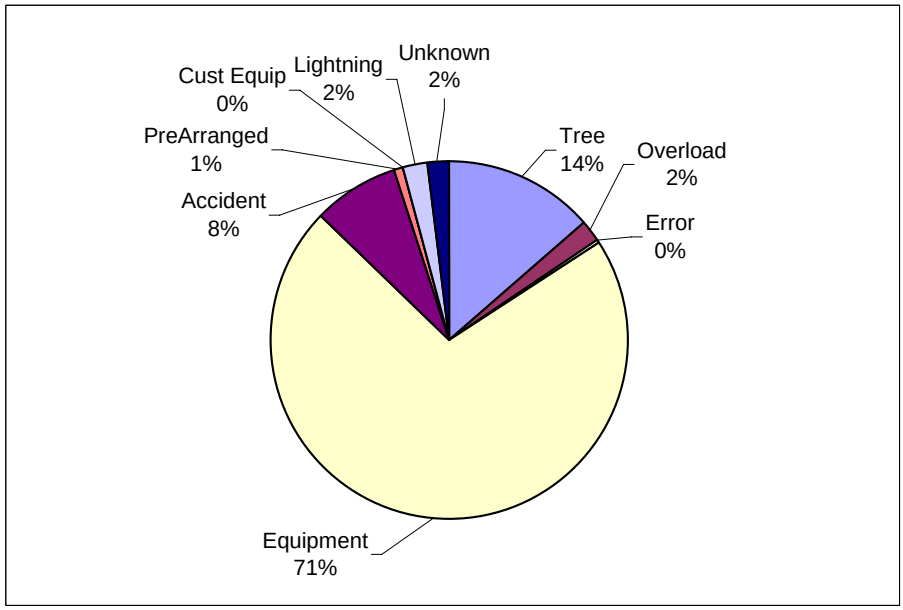

Figure 5: Con Edison's 2008 Radial Interruptions by Cause

Con Edison had one of its worst years for network duration in 2008. In recent years, Con Edison has missed its duration targets for both network and non-network.[14] As part of last year's report, Staff recommended that the Company conduct a detailed self assessment into why its duration performance associated with its radial systems had deteriorated. Con Edison responded by noting that nearly 40% of it longer duration outages are associated with weather events that typically occur in the late afternoon and early evening. As a result, the Company has initiated a study to correlate weather patterns to high duration events. Based on the results of the study, the Company expects to be able to better predict events and ensure sufficient staffing levels are on duty. For 2009, the Con Edison has established a program to experiment with length of shifts (8-hr vs. 12-hr) to determine which provides better coverage, and will be implementing an automated call system to improve crew response times. The Company is also considering dedicated crews to respond to specific outages and using electricians as first responders. In 2008, Con Edison established a new workplace in Westchester County to reduce travel time in that area.

Finally, Con Edison has recently assembled a task force to identify strategies to help improve its network and radial duration performances. Staff will be meeting with the task force in June to review new proposed actions. We are encouraged by the pilot programs and would like to see successful programs applied on a company-wide basis. Therefore, Staff recommends that Con Edison file a report by September 15, 2009 detailing information learned by the task force and during pilot programs. The report should include information on how Con Edison will implement successful programs on a permanent basis. Additionally, Staff recommends that Con Edison perform a self-assessment to identify strategies to improve its network performance and identify corrective actions that are unique to its network system. The self assessment should also be filed by September 15, 2009.

[14] In 2007, a short duration incident affecting a large number of customers resulted in a network duration

NATIONAL GRID

Table 4: National Grid's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.02**	**0.98**	**1.01**	**0.96**	0.75	0.94
Duration (CAIDI)	2.04	**2.32**	2.05	2.01	1.96	2.08

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's territories include metropolitan areas such as the cities of Buffalo, Albany, and Syracuse. National Grid also serves many rural areas in northern New York and the Adirondacks.

Overall, National Grid improved in 2008 and achieved all of its reliability targets. Previously, National Grid missed the frequency target level of 0.93 for each year from 2004 until 2007. Results this year, however, significantly improved and the Company met the target with an end result of 0.75. Duration results were better in 2008 as well; the Company has performed better than the duration target for three consecutive years now. In general, the utility had improved service on a region by region basis.

The overall reliability improvements are partially due to the installation of 432 reclosers, of which most were identified and installed through the Engineering Reliability Review (ERR) process since 2006. The Company installed 234 out of the 432 reclosers during the calendar year of 2008. Results for both the frequency and duration categories were unusually low, due in part to the numerous interruptions resulting from major storms in 2008. Although the Company exhibited a significant reliability improvement through various efforts, it is not likely that results of this magnitude will continue in the future. Staff will encourage the utility to continue with efforts in order to sustain a reasonable level of reliability.

As a result of past reliability results, the Commission placed additional emphasis on National Grid's reliability performance in association with its acquisition of Keyspan, which provides electric distribution services to the Long Island Power

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that was well below historic performances.

Authority. Because of this acquisition, the Commission created an Order requiring the utility to file details of its capital expenditure spending. Staff actively reviews listed projects within this filing. Additionally, Staff provides input and recommendations on the justification and progress of the projects.

As seen in Figure 6, equipment failures are the leading cause of interruptions for National Grid, however, this has been improving over the past five years. The five year average number of interruptions in this category is approximately 4,000; yet this year, the utility reported around 3,500 such occurrences. Furthermore, results showed that the utility reduced the number of customers affected and customer hours for this cause code by almost one half compared to 2007. As evident in the equipment failure cause code results from 2008, the above noted programs appear to be useful methods for improving National Grid's reliability performance in association with equipment failures.

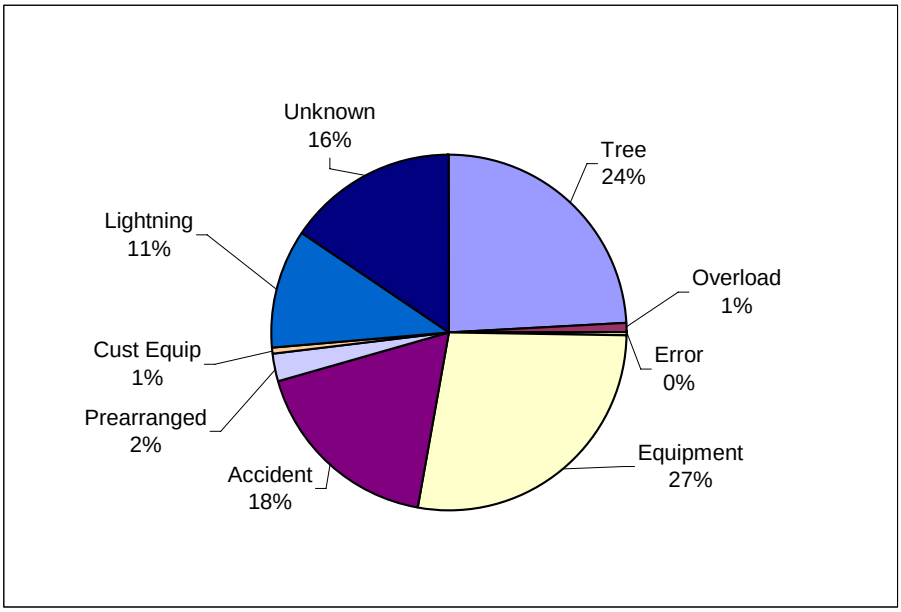


Figure 6: National Grid's 2008 Interruptions by Cause

National Grid made a commitment to spend $1.47 billion on capital improvements to its transmission and distribution system over a five year period from 2007 until 2011. The five-year investment plan contains proposed projects and strategies

to upgrade and replace components on its electric system. In particular, the utility developed a Reliability Enhancement Plan (REP) to improve its performance by focused maintenance work on poor performing circuits and replacement of aging assets. This plan specifically includes a targeted program to enhance the performance of feeders, asset replacement, an improved inspection and maintenance program, and a tree trimming program. The REP also provides for the installation of sectionalizing equipment and animal guards that will help to minimize the number of customers affected when an outage occurs, or to avoid interruptions in general. In conjunction with other programs, National Grid has replaced 665 transformers which were deteriorated or overloaded. As noted above, the Company identified and installed 432 reclosers since 2006. Many of the deteriorated assets addressed by the REP were identified as a result of the utility's inspection program.

The second highest contributor to National Grid's interruption performance for 2008 was tree-related outages; however, the Company showed signs of improvement as compared with last year's results in this area as well. Although the number of interruptions in 2008 for this cause code was fairly close to results of 2007, the number of customers affected and customer hours were reduced from last year by approximately 15%. Prior performance had prompted the utility to shorten its trimming cycle from six years to a more traditional five year period in urban areas. National Grid has also expanded its program to remove "danger" trees outside of the standard clearance zone. With these amplified activities, the utility has gradually increased its spending on distribution tree trimming in recent years. National Grid spent approximately $33 million for distribution trimming during fiscal year 2008. The drop in tree-related interruptions in 2008 was mainly due to a reduced number of interruptions related to fallen trees. Outages caused by broken limbs and tree growth actually increased as compared with last years results. Furthermore, the majority of improvements within this cause code occurred in the Syracuse and Buffalo areas. Tree-related frequency results were actually up in five of National Grid's eight operating divisions.

The number of accident caused interruptions in 2008 as compared with 2007decreased by approximately 20% and yielded a reduction of approximate 25% for both customers affected and customer duration. The number of unknown causes of interruptions in 2008 was fairly equivalent to those of 2007, however, the number of customer affected and customer duration were higher than the 2007 results. The number of 2008 lightning caused interruptions was also close to those of 2007, but the customer affected and customer duration decreased by approximately one half compared to the previous results.

National Grid's capital investment program is having a positive affect. National Grid should continue to pursue infrastructure investments that relate reliability. As part of Case 06-M-0878, Staff will continue to closely monitor the Company's capital improvements.

NEW YORK STATE ELECTRIC AND GAS

Table 5: NYSEG's Historic Performance Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13
Duration (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05

Approximately 840,000 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

The year 2008 showed improvement over last year's poor reliability performance by the Company. NYSEG's 2008 frequency performance of 1.11 was better than both the previous year's performance and its five year average performance level. The 2008 duration performance of 2.08 was also better than both the previous year's performance, however, still slightly higher than the five year average. The two major

contributors to NYSEG's interruptions were tree contacts (41%) and equipment failures (21%), as shown in Figure 7.

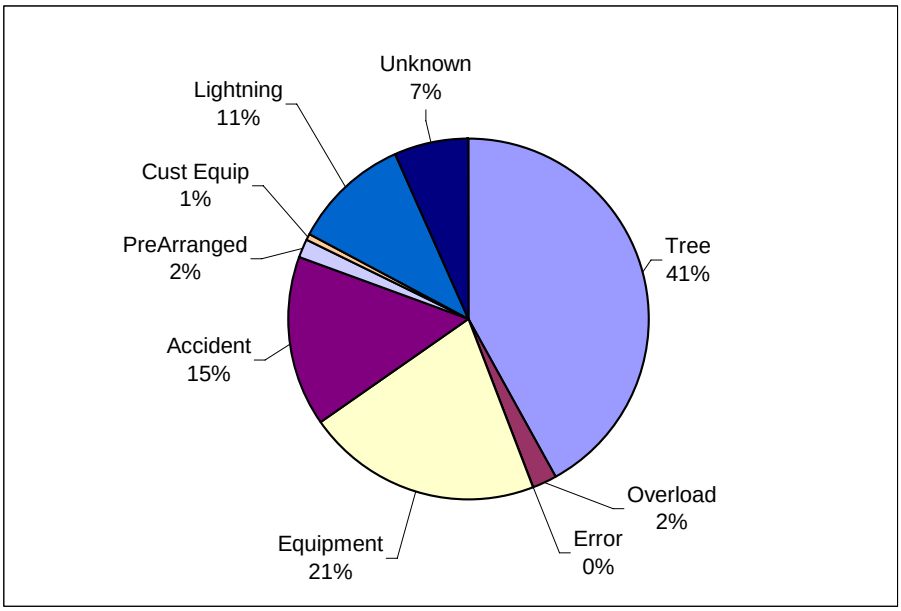


Figure 7: NYSEG's 2008 Interruptions by Cause

Tree related interruptions have consistently had the greatest impact on NYSEG's interruption performance. As shown in Table 6 below, NYSEG's performance has continuously declined with respect to tree caused interruptions. In last year's reliability report, Staff recommended that NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. On January 7, 2009, NYSEG responded to Staff's recommendation stating that increased costs for tree trimming efforts per mile have reduced the number of overall miles completed each year. The report showed

Table 6: NYSEG's Reliability Performance with respect to Tree Caused Interruptions

Year	Customers Affected by Tree Interruptions	Customer Hours for Tree Interruptions	Number of Interruptions due to Trees
2004	205,245	477,623	3,002
2005	288,347	666,940	4,090
2006	297,893	735,250	3,779
2007	333,469	865,694	3,997
2008	349,065	886,543	4,215

approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. The number of customers affected by tree events has increased by 32% compared to the average for the years 2002 through 2005.

In Case 05-E-1222, NYSEG was allowed $17.7 million in rates for tree trimming on an annual basis effective in 2007. The Company indicated, however, that it has spent less in tree trimming on its distribution system than what was allowed in rates.

NYSEG's existing tree trimming program requires cycle trimming on all of the 35 kV circuits, but only the three phase sections of its 12 kV and 5 kV circuits, and single phase sections of these circuits on an ad hoc basis. The Company recommended in its self-assessment that in order to reduce tree caused interruptions, the existing tree trimming program should be expanded to perform cycle trimming on all single phase portions of its circuits. Given that NYSEG has not completed its planned trimming in recent years, Staff has concerns about NYSEG's tree trimming program.

Even though both frequency and duration improved in 2008 as compared with 2007, Staff continues to be concerned with NYSEG's overall approach to managing its tree caused interruptions. NYSEG's decision to reduce its tree trimming activities despite declining performance in this area needs to be examined. As a result, Staff will be seeking detailed information and explanations of trimming activities performed, spending variances, and quality assurance as part of the newly established Case 09-E-0472.

Equipment failures are the second highest cause of interruptions. In the Iberdrola merger (Case 07-M-0906), NYSEG was required to submit a condition assessment report. This report was received by Staff on December 8, 2008, and provided information on all of the electrical equipment and assets within its service territory and identified how age is a continued concern on the entire electrical system. The report concluded that NYSEG's electrical system is in "sound" condition. Over the past five years, however, NYSEG's reliability data show a steady increase in the number of interruptions caused by the failure or poor performance of the system equipment.

To proactively address the Company's aging infrastructure and equipment failure issues, NYSEG started a Transmission and Distribution Infrastructure Replacement Program (TDIRP). This program has been in place since 2005 and is the principal funding source for projects that address overall system condition issues. Overall Staff views this program as beneficial; however, funding for the program has been on the decline, and Staff is concerned whether NYSEG is committing appropriate funding resources to making the necessary infrastructure investments through TDIRP.

Another concern noted in Staff's reliability report last year was a declining trend in field staffing/personnel levels. As required, NYSEG provided its self-assessment that stated cost pressures have diminished its ability to increase or even maintain the field personnel levels once held in previous years. The Company goes on to say that while it continues to maintain sufficient numbers of workers to achieve the established reliability performance targets, increasing the number of qualified field personnel by approximately 10% may support improved duration numbers. As shown in Table 7 below, NYSEG has increased in total field personnel number for 2008. The increases, however, are for apprentice workers and not the qualified workers the Company is seeking.[15]

Table 7: NYSEG's Field Personnel Information

	2004	2005	2006	2007	2008
Total Number of Field Personnel	646	651	619	608	662
Percent Change from Previous Year	----	+0.8%	-4.9%	-1.8%	+8.2%

ROCHESTER GAS AND ELECTRIC

Table 8: RG&E's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81
Duration (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81

[15] It takes approximately 3 years for an apprentice to be considered a qualified worker.

RG&E serves approximately 360,000 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better performing utilities within the state. The Company has not failed its RPM targets of 0.90 for frequency and 1.90 for duration as established in its rate orders. As shown in Table 8, above, RG&E's performance for frequency and duration continue to be fairly consistent with its five year average. In 2008, the Company's frequency performance of 0.78 is the lowest since 2004. RG&E's duration performance of 1.85 in 2008 was slightly higher than both the previous year's performance. Figure 8 shows that the two major contributors to interruptions continue to be equipment failures (31%) and tree contacts (21%). The levels are slightly higher than the five year averages of both equipment failures and tree contacts.

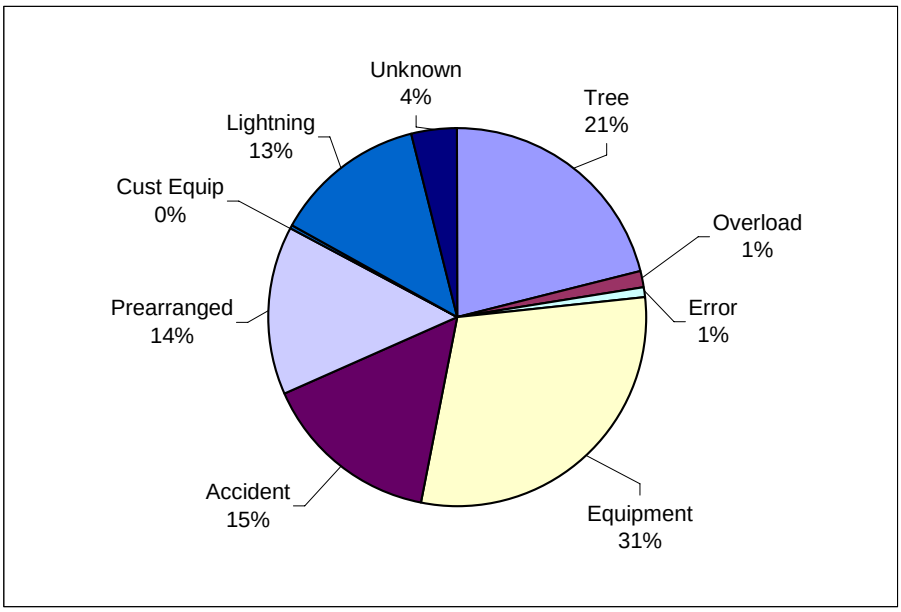


Figure 8: RG&E's 2008 Interruptions by Cause

Like NYSEG, RG&E was required to submit a conditions assessment report as part of the Iberdrola merger agreement. This report was received by Staff on December 8, 2008, and concluded that RGE's electrical system is in "sound" condition. Equipment failures, however, continues to be RG&E's highest contributor to its interruption performance. In 2007, RG&E implemented its own Transmission and Distribution Infrastructure Replacement Program (TDIRP), similar to that used by NYSEG, to address the Company's aging infrastructure and equipment failure issues. Staff encourages RG&E to make necessary infrastructure investments through TDIRP to ensure safe and reliable service to its customers.

CENTRAL HUDSON GAS AND ELECTRIC

Table 9: Central Hudson's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.36**	1.44	**1.59**	1.42	1.27	1.42
Duration (CAIDI)	**2.35**	2.70	**2.58**	2.43	2.47	2.51

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh. Central Hudson's RPM targets were reestablished at 1.45 for frequency and 2.50 for duration in its most recent rate order, effective in 2007.[16]

Central Hudson' frequency performance of 1.27 in 2008 was its best in five years, considerably better than its five-year average (Table 9, above). The 2008 duration performance of 2.47 was better than the five-year average, but still close to the RPM target of 2.50, however. Figure 9 shows that 37% of customer interruptions are due to tree related issues, followed by accidents at 22%.

[16] As part of the joint agreement adopted in the last rate order, Central Hudson was not assessed revenue adjustments for 2005 performances.

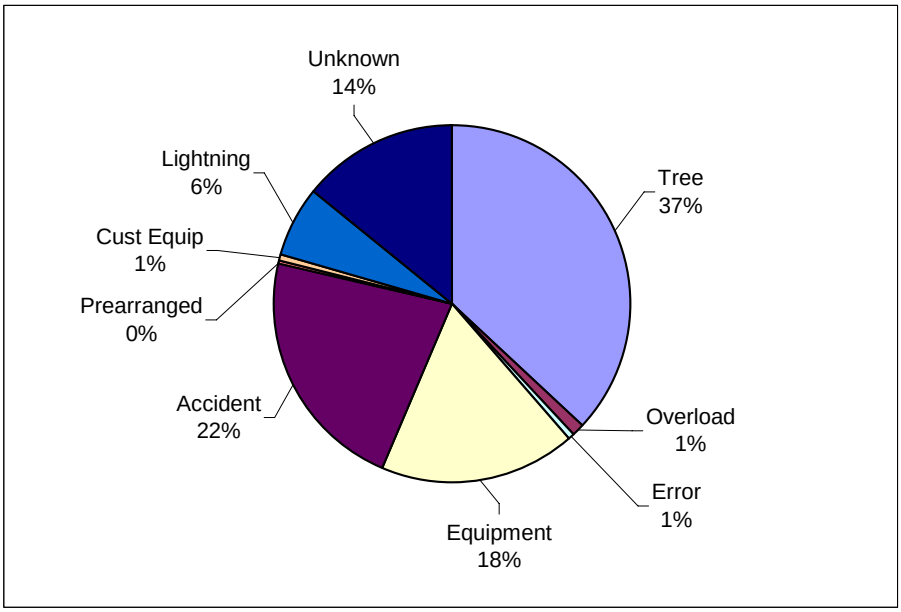


Figure 9: Central Hudson's 2008 Interruptions by Cause

Central Hudson has had a reduction in equipment failures resulting in customer outages since 2005 (see Table 10 below); in 2008, equipment failures were responsible for only 18% of the interruptions.

Table 10: Customers Affected by Service Interruptions

Year	Tree	Equipment
2004	136,933	89,177
2005	155,504	109,190
2006	172,850	104,263
2007	156,053	99,290
2008	137,170	86,115

In last year's report Staff directed that Central Hudson perform a self assessment of its line clearance program. Staff reviewed Central Hudson's report and found it satisfactory. It does appear that Central Hudson has been addressing tree caused interruptions in a logical way, expanding lessons learned in its enhanced clearance program to the rest of the system and positive results might have begun to be seen (see Table 10, above). In its current rate case proceeding, based on the recommendation of its

consultant and actual experience, Central Hudson proposed (and Staff supported) expanding its enhanced tree trimming program of critical three-phase lines as well as the implementation of the modified enhanced program for the rest of the system, both single and multi-phase. A possible encouraging trend in reduced tree outages may also be seen in Table 9 (above) and will be something we will monitor.

Central Hudson's annual reliability report indicates one driver of outage duration is overloaded distribution transformers. Several districts noted they are replacing transformers before they fail using a combination of Transformer Load Management database and field checks with line foremen. This approach appears to have merit especially as preparation for warmer summers, such as was experienced in 2008.

ORANGE AND ROCKLAND

Table 11: O&R's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22
Duration (CAIDI)	**1.61**	**1.71**	1.51	1.60	**1.83**	1.65

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland is the smallest of the major investor-owned electric utilities. It serves approximately 217,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2008, the Company met its reliability performance mechanism target for frequency. The 2008 frequency performance, although higher than 2007, was still below the Company's five year average performance level. Orange and Rockland, however, failed its reliability performance mechanism for duration in 2008 with a performance of 1.83.

As shown in Figure 10 (below), equipment failures (34%) and trees (31%) caused the majority of interruptions in 2008. Orange and Rockland is addressing reliability issues due to equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable Maintenance and

Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

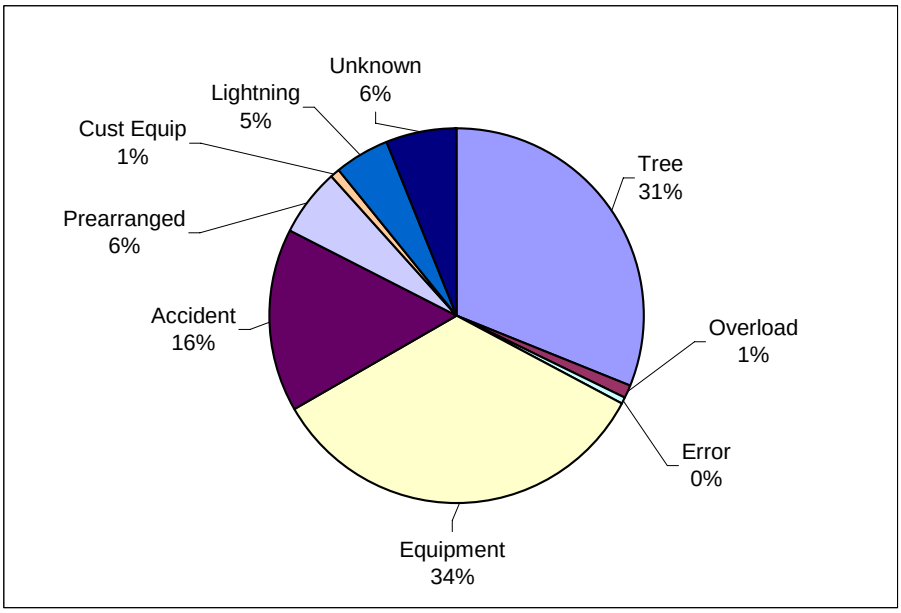


Figure 10: Orange and Rockland's 2008 Interruptions by Cause

The Company is addressing the tree concerns through increased efforts on its trimming programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify additional efforts to address key areas with recurring outages such as a recurring outage identification program and a "cycle buster" trimming program. These programs should help reduce the impact of tree contacts on the Company's electrical system through the coming years.

Orange and Rockland's duration performance in 2008 was slightly above its RPM target of 1.70. The Company had performed better than this target in both 2006 and 2007. Since its last rate filing (Case 07-0949), Orange and Rockland has been expressing concern that distribution automation equipment is negatively impacting its duration performance and recently made a presentation to Staff on the issue. As a result, Staff is working closely with the Company to determine the identifiable affects distribution automation has on the duration measure.

Staff believes that Orange and Rockland is appropriately installing more distribution automation equipment, increasing tree trimming efforts, and performing needed capital improvement projects to improve overall reliability. Equipment Failures and Tree Contacts continue to be the major causes of interruptions throughout the past five-years and this performance trend remains consistent throughout each operating division as well. Orange and Rockland's has been striving to control tree and equipment related interruptions for several years now. Even though immediate drastic changes are not anticipated due to the nature of the causes, small and steady improvements are expected in the years to come with the finalization of additional reliability projects.

RECOMMENDATIONS

The following is a summary of Staff recommendations based on our analysis of reliability performances in 2008. Additionally, NYSEG will have to respond to actions taken as part of Case 04-E-0472.

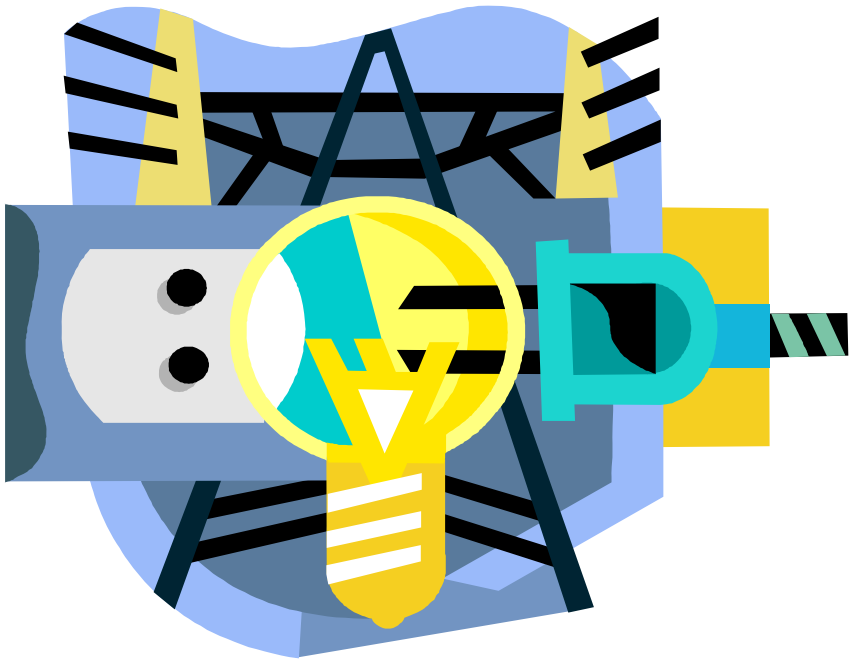
1. Con Edison should file a report no later than September 15, 2009 detailing information learned during pilot programs related to improving its duration performance and explaining how successful programs from the pilot programs would be implemented on a permanent basis.

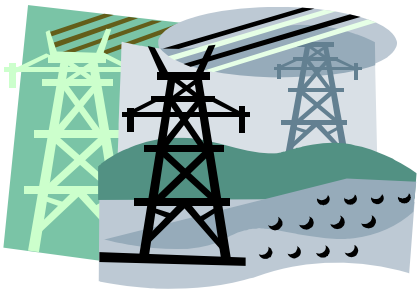
2. Con Edison should perform a self-assessment to identify strategies to improve its network duration performance and identify corrective actions that are unique to its network system. The self assessment should be filed no later than September 15, 2009.

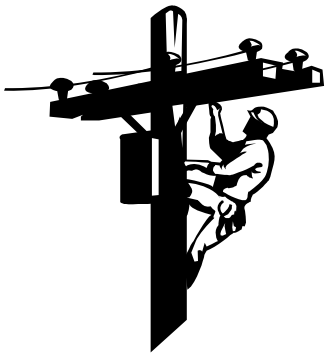
APPENDIX

2008 INTERRUPTON REPORT

The 2008 Interruption Report







Office of Electricity Gas and Water

June, 2009

ATTACHMENT
Definitions and Explanations of Terms Used in the 2008
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2008**, customers served is the number of customers as of 12/31/2008. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2007.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.36	1.44	1.59	1.42	1.27	1.42
DURATION	2.35	2.70	2.58	2.43	2.47	2.51
CONED						
FREQUENCY	0.11	0.14	0.16	0.16	0.13	0.14
DURATION	1.71	1.99	8.23	1.97	2.27	3.23
LIPA *						
FREQUENCY	0.83	0.85	0.75	0.90	0.77	0.82
DURATION	1.04	1.07	1.37	1.20	1.36	1.21
NAT GRID						
FREQUENCY	1.02	0.98	1.01	0.96	0.75	0.94
DURATION	2.04	2.32	2.05	2.01	1.96	2.08
NYSEG						
FREQUENCY	1.13	1.12	1.12	1.20	1.11	1.13
DURATION	1.96	1.96	2.01	2.22	2.08	2.05
O&R						
FREQUENCY	1.30	1.36	1.23	1.03	1.19	1.22
DURATION	1.61	1.71	1.51	1.60	1.83	1.65
RG&E						
FREQUENCY	0.86	0.79	0.79	0.83	0.78	0.81
DURATION	1.84	1.87	1.78	1.73	1.85	1.81
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.02	1.01	1.00	1.01	0.88	0.98
DURATION	1.81	1.95	1.92	1.88	1.89	1.89
STATEWIDE (WITH CONED)						
FREQUENCY	0.64	0.65	0.65	0.65	0.56	0.63
DURATION	1.80	1.95	2.57	1.89	1.93	2.03

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.42	1.83	2.20	1.51	2.15	1.82
DURATION	2.45	3.27	4.12	2.51	5.76	3.62
CONED						
FREQUENCY	0.11	0.15	0.23	0.18	0.14	0.16
DURATION	1.74	2.32	12.31	3.12	2.71	4.44
LIPA *						
FREQUENCY	0.91	1.07	1.17	1.03	1.09	1.05
DURATION	1.12	1.42	1.99	1.37	1.65	1.51
NAT GRID						
FREQUENCY	1.12	1.28	1.48	1.31	1.37	1.31
DURATION	2.15	2.76	7.18	2.70	4.32	3.82
NYSEG						
FREQUENCY	1.41	1.77	1.79	1.71	2.14	1.76
DURATION	2.26	3.27	10.32	3.62	7.07	5.31
O&R						
FREQUENCY	1.46	1.83	1.81	1.17	1.64	1.58
DURATION	1.77	2.42	2.15	1.92	2.94	2.24
RG&E						
FREQUENCY	0.98	0.93	0.98	1.16	1.36	1.08
DURATION	2.04	1.90	2.14	1.80	3.77	2.33
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.15	1.36	1.48	1.31	1.51	1.36
DURATION	1.97	2.60	6.02	2.56	4.62	3.55
STATEWIDE (WITH CONED)						
FREQUENCY	0.71	0.85	0.96	0.83	0.93	0.86
DURATION	1.95	2.58	6.65	2.61	4.50	3.66

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	50,242	54,434	55,211	55,425	53,758	53,814
Number of Customer-Hours	8,015,041	8,631,869	8,439,916	8,439,464	7,399,179	8,185,094
Number of Customers Affected	4,439,677	4,433,386	4,400,072	4,495,428	3,910,426	4,335,798
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.81	1.95	1.92	1.88	1.89	1.89
Average Duration Per Customers Served	1.83	1.97	1.91	1.90	1.67	1.86
Interruptions Per 1000 Customers Served	11.49	12.39	12.51	12.50	12.12	12.20
Number of Customers Affected Per Customer Served (SAIFI)	1.02	1.01	1.00	1.01	0.88	0.98

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	59,458	65,019	65,752	66,746	65,403	64,476
Number of Customer-Hours	8,596,012	9,506,355	12,603,322	9,429,452	8,326,562	9,692,341
Number of Customers Affected	4,779,817	4,873,534	4,905,844	4,996,967	4,319,550	4,775,142
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.80	1.95	2.57	1.89	1.93	2.03
Average Duration Per Customers Served	1.14	1.26	1.66	1.23	1.08	1.28
Interruptions Per 1000 Customers Served	7.91	8.61	8.65	8.72	8.51	8.48
Number of Customers Affected Per Customer Served (SAIFI)	0.64	0.65	0.65	0.65	0.56	0.63

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	53,535	66,767	70,872	61,753	73,150	65,215
Number of Customer-Hours	9,852,887	15,493,419	39,413,242	14,848,512	30,962,269	22,114,066
Number of Customers Affected	5,009,438	5,960,730	6,548,910	5,808,516	6,705,414	6,006,602
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.97	2.60	6.02	2.56	4.62	3.55
Average Duration Per Customers Served	2.25	3.53	8.93	3.35	6.98	5.01
Interruptions Per 1000 Customers Served	12.24	15.20	16.05	13.93	16.49	14.78
Number of Customers Affected Per Customer Served (SAIFI)	1.15	1.36	1.48	1.31	1.51	1.36

STATEWIDE (WITH CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	62,806	77,937	86,734	74,261	85,548	77,457
Number of Customer-Hours	10,454,054	16,612,929	48,437,221	16,630,252	32,188,186	24,864,528
Number of Customers Affected	5,355,101	6,442,863	7,282,114	6,379,276	7,158,329	6,523,537
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.95	2.58	6.65	2.61	4.50	3.66
Average Duration Per Customers Served	1.39	2.20	6.37	2.17	4.19	3.27
Interruptions Per 1000 Customers Served	8.36	10.32	11.41	9.70	11.14	10.18
Number of Customers Affected Per Customer Served (SAIFI)	0.71	0.85	0.96	0.83	0.93	0.86

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CENTRAL HUDSON
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,514	6,911	7,538	6,386	6,857	6,841
Number of Customer-Hours	917,136	1,125,389	1,201,109	1,021,859	933,993	1,039,897
Number of Customers Affected	389,969	416,547	464,765	420,769	377,564	413,923
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.35	2.70	2.58	2.43	2.47	2.51
Average Duration Per Customers Served	3.21	3.89	4.10	3.46	3.13	3.56
Interruptions Per 1000 Customers Served	22.77	23.91	25.74	21.62	22.98	23.40
Number of Customers Affected Per Customer Served (SAIFI)	1.36	1.44	1.59	1.42	1.27	1.42

CENTRAL HUDSON
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,756	8,309	10,066	6,681	9,887	8,340
Number of Customer-Hours	994,057	1,735,705	2,649,690	1,117,802	3,705,277	2,040,506
Number of Customers Affected	405,534	530,319	643,778	444,813	642,949	533,479
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.45	3.27	4.12	2.51	5.76	3.62
Average Duration Per Customers Served	3.47	6.00	9.05	3.78	12.42	6.95
Interruptions Per 1000 Customers Served	23.62	28.74	34.38	22.62	33.13	28.50
Number of Customers Affected Per Customer Served (SAIFI)	1.42	1.83	2.20	1.51	2.15	1.82

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,216	10,585	10,541	11,321	11,645	10,662
Number of Customer-Hours	580,971	874,487	4,163,407	989,988	927,383	1,507,247
Number of Customers Affected	340,140	440,148	505,772	501,539	409,124	439,345
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.71	1.99	8.23	1.97	2.27	3.23
Average Duration Per Customers Served	0.18	0.28	1.31	0.31	0.29	0.47
Interruptions Per 1000 Customers Served	2.93	3.35	3.31	3.52	3.59	3.34
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.14	0.16	0.16	0.13	0.14

CON ED (SYSTEM)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,271	11,170	15,862	12,508	12,398	12,242
Number of Customer-Hours	601,167	1,119,510	9,023,979	1,781,740	1,225,917	2,750,463
Number of Customers Affected	345,663	482,133	733,204	570,760	452,915	516,935
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.74	2.32	12.31	3.12	2.71	4.44
Average Duration Per Customers Served	0.19	0.35	2.83	0.55	0.38	0.86
Interruptions Per 1000 Customers Served	2.95	3.53	4.98	3.89	3.82	3.83
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.15	0.23	0.18	0.14	0.16

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,360	4,967	4,274	5,571	5,485	4,931
Number of Customer-Hours	44,195	59,566	2,947,306	316,477	252,964	724,101
Number of Customers Affected	12,138	13,406	48,467	176,430	40,301	58,148
Number of Customers Served	2,319,321	2,339,622	2,363,897	2,361,145	2,385,760	2,353,949
Average Duration Per Customer Affected (CAIDI)	3.64	4.44	60.81	1.79	6.28	15.39
Average Duration Per Customers Served	0.02	0.03	1.26	0.13	0.11	0.31
Interruptions Per 1000 Customers Served	1.89	2.14	1.83	2.36	2.32	2.11
Number of Customers Affected Per Customer Served (SAIFI)	0.005	0.006	0.021	0.075	0.017	0.025

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** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (RADIAL)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,856	5,618	6,267	5,750	6,160	5,730
Number of Customer-Hours	536,776	814,921	1,216,101	673,511	674,419	783,146
Number of Customers Affected	328,002	426,742	457,305	325,109	368,823	381,196
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.64	1.91	2.66	2.07	1.83	2.02
Average Duration Per Customers Served	0.64	0.97	1.43	0.79	0.76	0.92
Interruptions Per 1000 Customers Served	5.81	6.67	7.39	6.73	6.97	6.72
Number of Customers Affected Per Customer Served (SAIFI)	0.39	0.51	0.54	0.38	0.42	0.45

CON ED (RADIAL)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,911	6,203	11,588	6,937	6,913	7,310
Number of Customer-Hours	556,972	1,059,944	6,076,673	1,465,264	972,954	2,026,361
Number of Customers Affected	333,525	468,727	684,737	394,330	412,614	458,787
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.67	2.26	8.87	3.72	2.36	3.78
Average Duration Per Customers Served	0.67	1.26	7.17	1.71	1.10	2.38
Interruptions Per 1000 Customers Served	5.88	7.37	13.67	8.12	7.82	8.57
Number of Customers Affected Per Customer Served (SAIFI)	0.40	0.56	0.81	0.46	0.47	0.54

* Customers Served is the number of customers served at the end of the current year.
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LIPA
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,423	17,728	18,634	18,736	18,135	17,731
Number of Customer-Hours	942,669	999,412	1,129,275	1,190,411	1,166,613	1,085,676
Number of Customers Affected	908,253	931,276	823,396	995,077	856,405	902,881
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.04	1.07	1.37	1.20	1.36	1.21
Average Duration Per Customers Served	0.87	0.91	1.02	1.07	1.05	0.98
Interruptions Per 1000 Customers Served	14.16	16.17	16.89	16.90	16.33	16.09
Number of Customers Affected Per Customer Served (SAIFI)	0.83	0.85	0.75	0.90	0.77	0.82

LIPA
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,956	21,317	24,905	20,077	20,471	20,545
Number of Customer-Hours	1,105,002	1,675,011	2,564,134	1,564,559	1,998,270	1,781,395
Number of Customers Affected	986,170	1,177,059	1,289,698	1,142,365	1,208,292	1,160,717
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.12	1.42	1.99	1.37	1.65	1.51
Average Duration Per Customers Served	1.01	1.53	2.32	1.41	1.80	1.62
Interruptions Per 1000 Customers Served	14.65	19.44	22.58	18.11	18.43	18.64
Number of Customers Affected Per Customer Served (SAIFI)	0.91	1.07	1.17	1.03	1.09	1.05

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
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NATIONAL GRID
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	13,917	13,680	13,665	14,606	12,939	13,761
Number of Customer-Hours	3,274,229	3,598,884	3,289,340	3,045,363	2,334,754	3,108,514
Number of Customers Affected	1,602,708	1,551,448	1,607,461	1,518,634	1,188,585	1,493,767
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.04	2.32	2.05	2.01	1.96	2.08
Average Duration Per Customers Served	2.08	2.28	2.07	1.92	1.46	1.96
Interruptions Per 1000 Customers Served	8.82	8.66	8.62	9.19	8.12	8.68
Number of Customers Affected Per Customer Served (SAIFI)	1.02	0.98	1.01	0.96	0.75	0.94

NATIONAL GRID
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	14,760	16,211	16,279	16,222	18,301	16,355
Number of Customer-Hours	3,800,127	5,568,127	16,813,162	5,605,931	9,410,833	8,239,636
Number of Customers Affected	1,766,092	2,020,066	2,341,235	2,075,480	2,177,786	2,076,132
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.15	2.76	7.18	2.70	4.32	3.82
Average Duration Per Customers Served	2.41	3.52	10.61	3.53	5.90	5.19
Interruptions Per 1000 Customers Served	9.35	10.26	10.27	10.20	11.48	10.31
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.28	1.48	1.31	1.37	1.31

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NYSEG
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	8,946	10,190	9,682	10,317	10,027	9,832
Number of Customer-Hours	1,866,112	1,872,868	1,913,315	2,299,142	1,980,213	1,986,330
Number of Customers Affected	952,258	955,009	953,941	1,034,113	953,105	969,685
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05
Average Duration Per Customers Served	2.21	2.21	2.24	2.68	2.30	2.32
Interruptions Per 1000 Customers Served	10.59	12.00	11.33	12.00	11.66	11.48
Number of Customers Affected Per Customer Served (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13

NYSEG
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	10,269	14,364	12,835	12,928	17,008	13,481
Number of Customer-Hours	2,687,162	4,926,508	15,787,602	5,314,914	12,974,501	8,338,137
Number of Customers Affected	1,188,998	1,504,612	1,529,247	1,469,825	1,836,251	1,505,787
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	2.26	3.27	10.32	3.62	7.07	5.31
Average Duration Per Customers Served	3.18	5.80	18.48	6.18	15.09	9.75
Interruptions Per 1000 Customers Served	12.15	16.91	15.02	15.04	19.78	15.78
Number of Customers Affected Per Customer Served (SAIFI)	1.41	1.77	1.79	1.71	2.14	1.76

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O&R
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,546	2,718	2,688	2,596	2,993	2,708
Number of Customer-Hours	440,617	493,591	397,977	356,514	470,431	431,826
Number of Customers Affected	274,124	289,022	264,121	222,895	256,943	261,421
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.61	1.71	1.51	1.60	1.83	1.65
Average Duration Per Customers Served	2.09	2.32	1.85	1.65	2.18	2.02
Interruptions Per 1000 Customers Served	12.10	12.80	12.53	12.00	13.88	12.66
Number of Customers Affected Per Customer Served (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22

O&R
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,729	3,123	3,546	2,738	3,655	3,158
Number of Customer-Hours	542,652	942,127	836,046	483,938	1,043,235	769,600
Number of Customers Affected	307,396	388,553	388,164	252,650	354,315	338,216
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.77	2.42	2.15	1.92	2.94	2.24
Average Duration Per Customers Served	2.58	4.44	3.90	2.24	4.84	3.60
Interruptions Per 1000 Customers Served	12.97	14.71	16.53	12.66	16.95	14.76
Number of Customers Affected Per Customer Served (SAIFI)	1.46	1.83	1.81	1.17	1.64	1.58

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RG&E
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,896	3,207	3,004	2,784	2,807	2,940
Number of Customer-Hours	574,278	541,725	508,899	526,175	513,175	532,850
Number of Customers Affected	312,365	290,084	286,388	303,940	277,824	294,120
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81
Average Duration Per Customers Served	1.58	1.48	1.40	1.44	1.44	1.47
Interruptions Per 1000 Customers Served	7.96	8.79	8.24	7.63	7.86	8.10
Number of Customers Affected Per Customer Served (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81

RG&E
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	3,065	3,443	3,241	3,107	3,828	3,337
Number of Customer-Hours	723,887	645,940	762,609	761,368	1,830,153	944,791
Number of Customers Affected	355,248	340,121	356,788	423,383	485,821	392,272
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	2.04	1.90	2.14	1.80	3.77	2.33
Average Duration Per Customers Served	1.99	1.77	2.09	2.09	5.12	2.61
Interruptions Per 1000 Customers Served	8.43	9.43	8.89	8.52	10.72	9.20
Number of Customers Affected Per Customer Served (SAIFI)	0.98	0.93	0.98	1.16	1.36	1.08

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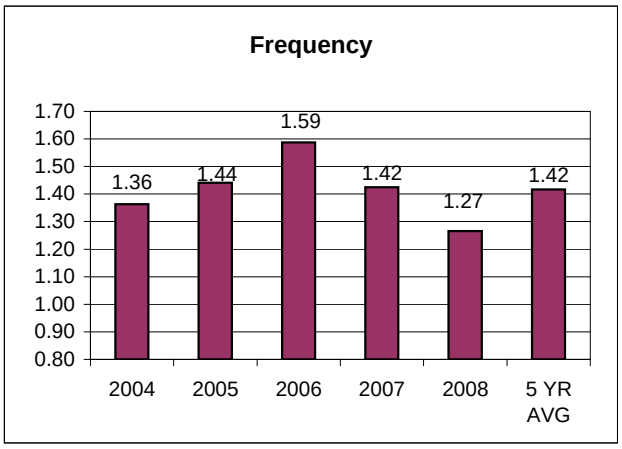
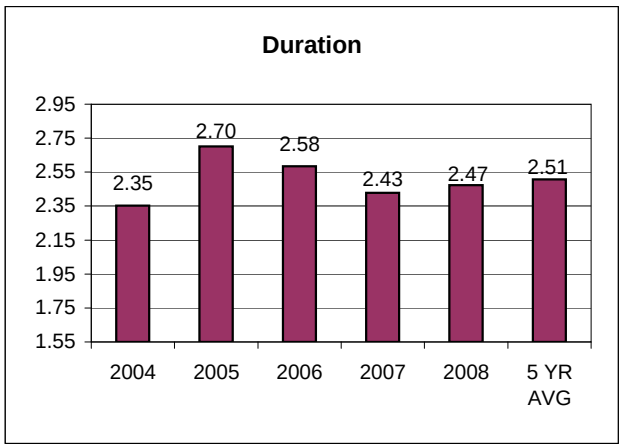
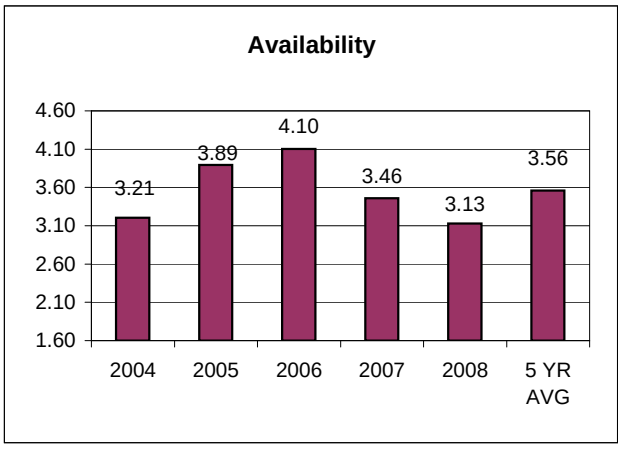
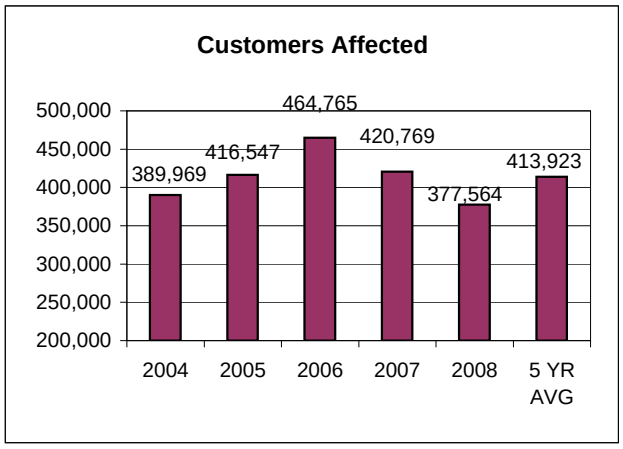
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

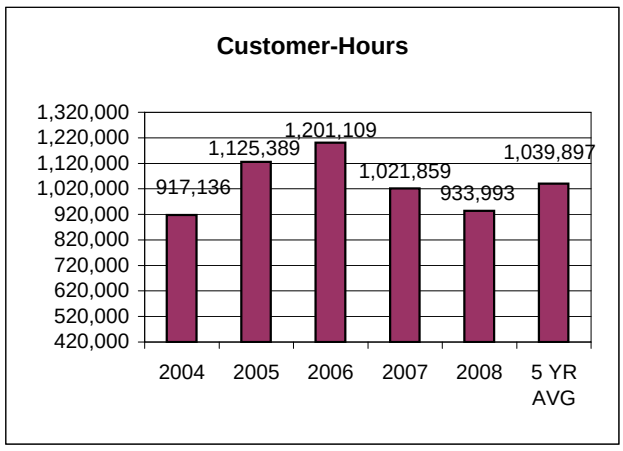
Central Hudson Gas and Electric
(Excluding Major Storms)

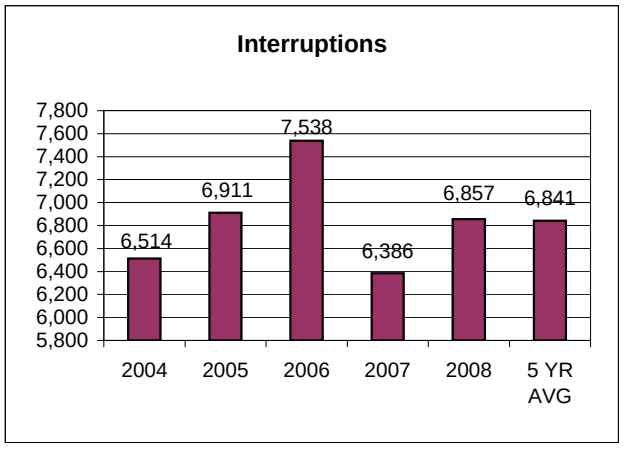




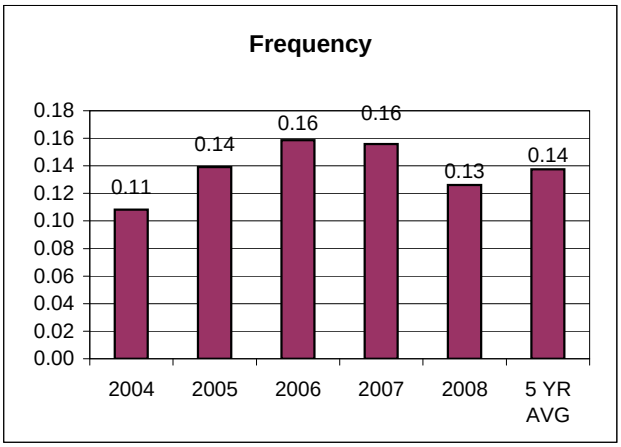


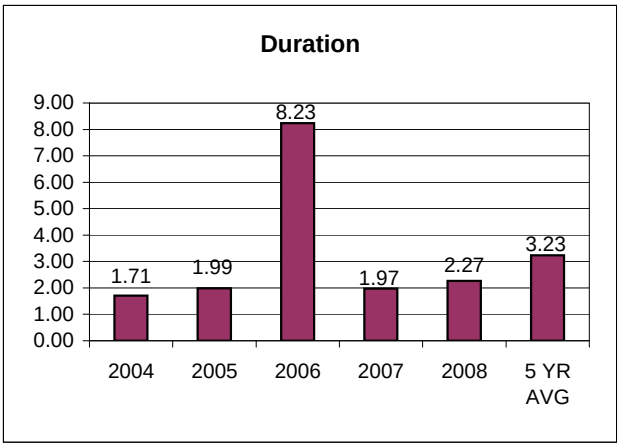


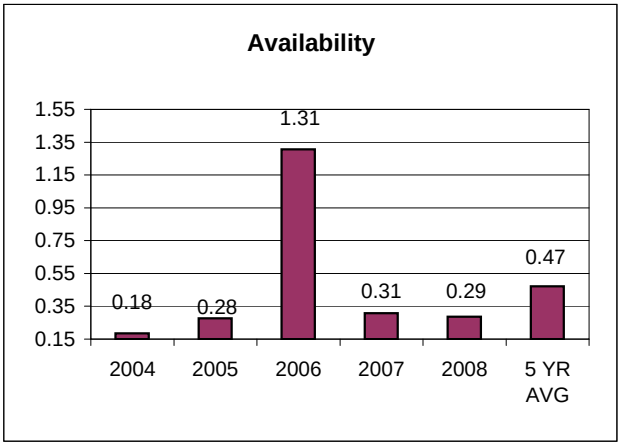


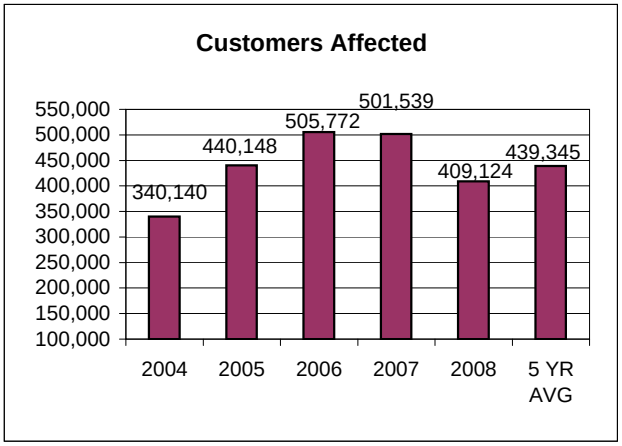


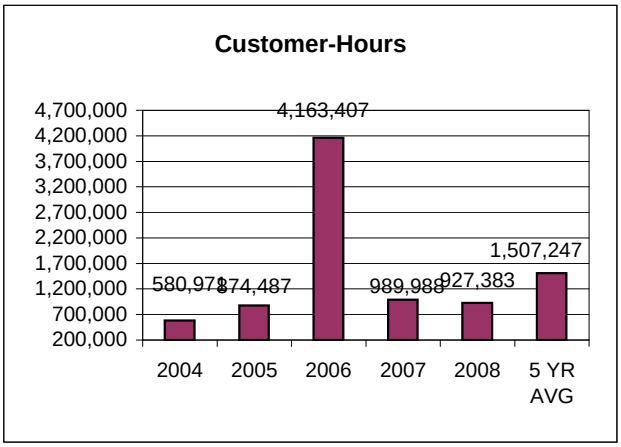
Consolidated Edison - System
(Excluding Major Storms)

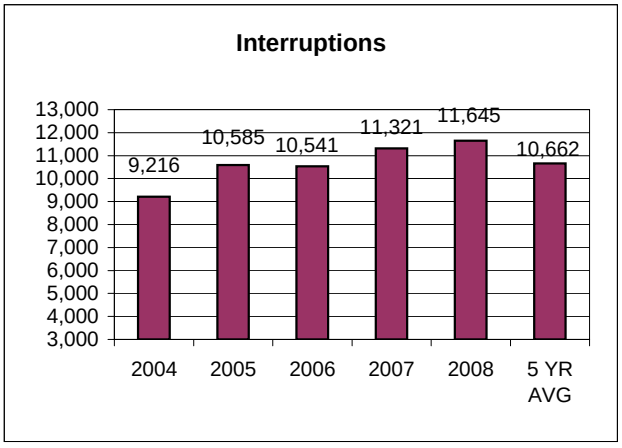




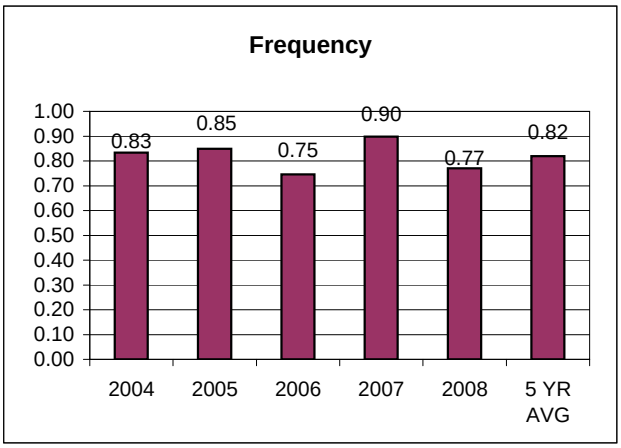


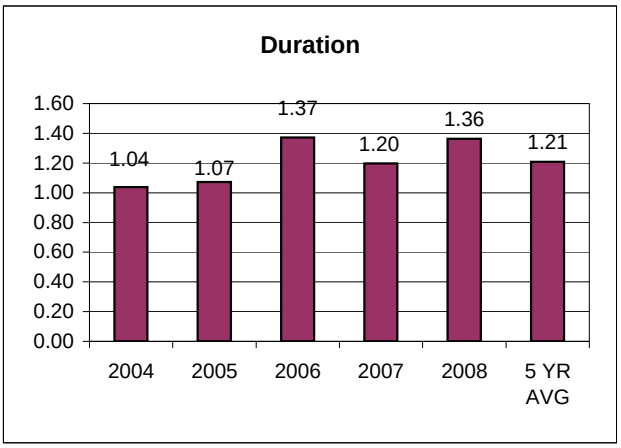


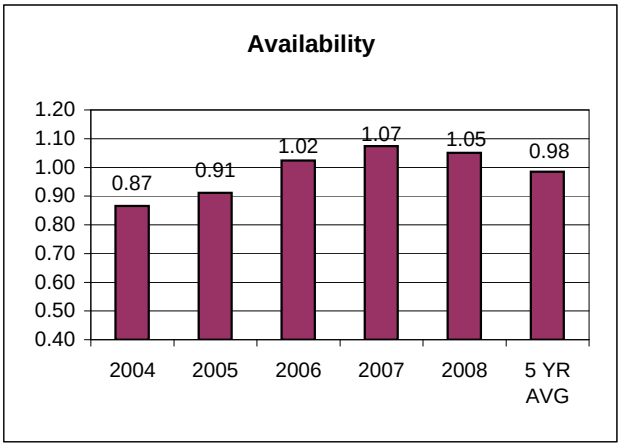


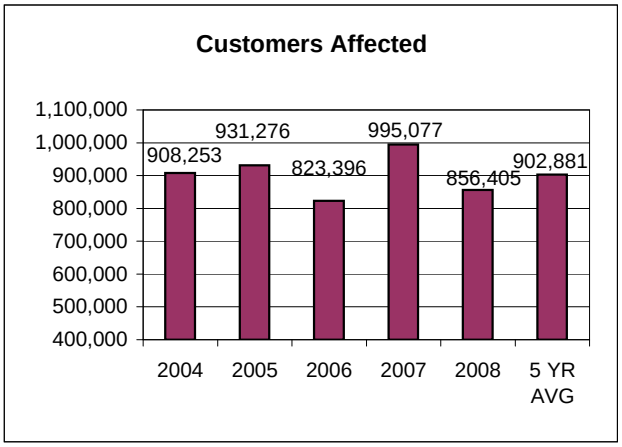


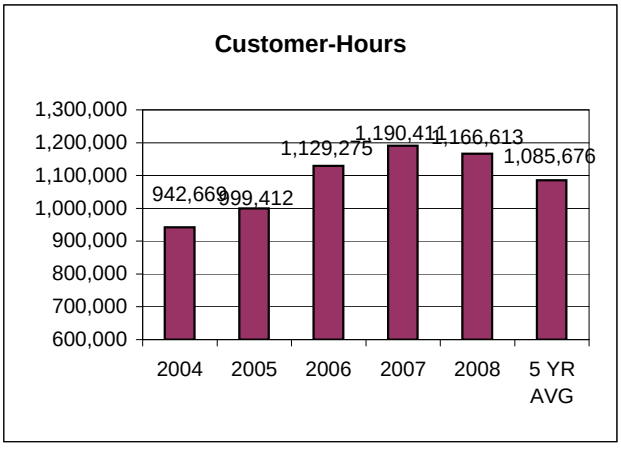
Long Island Power Authority
(Excluding Major Storms)

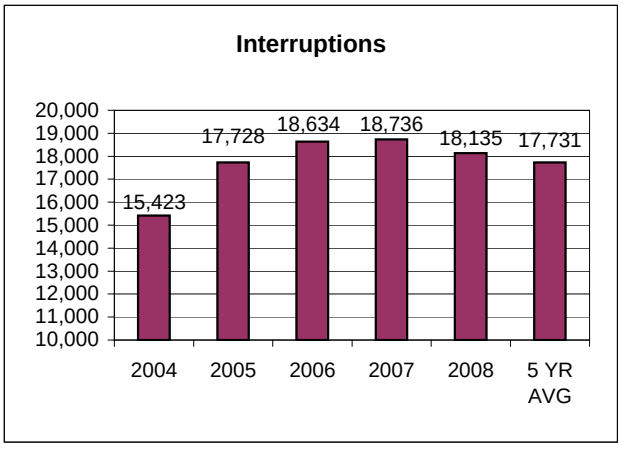








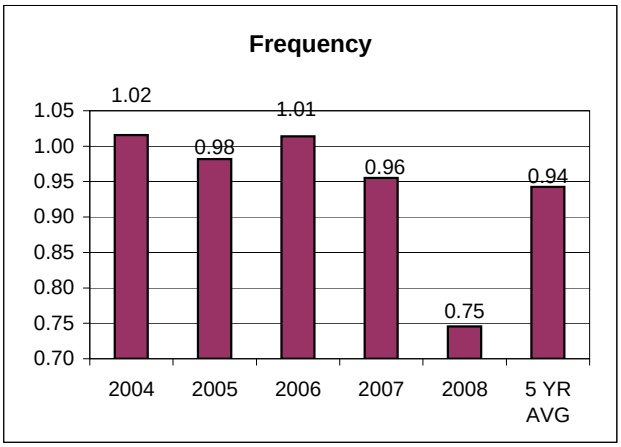


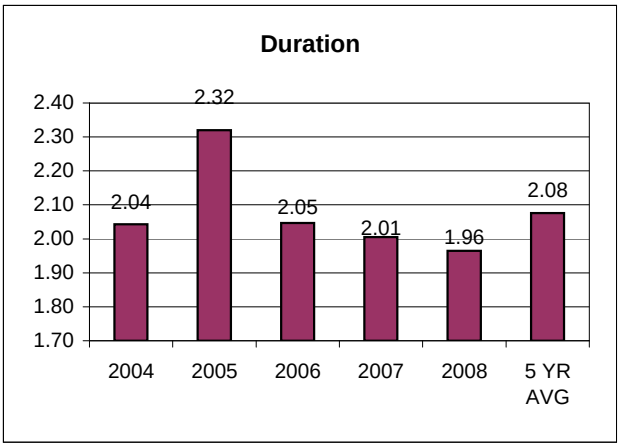


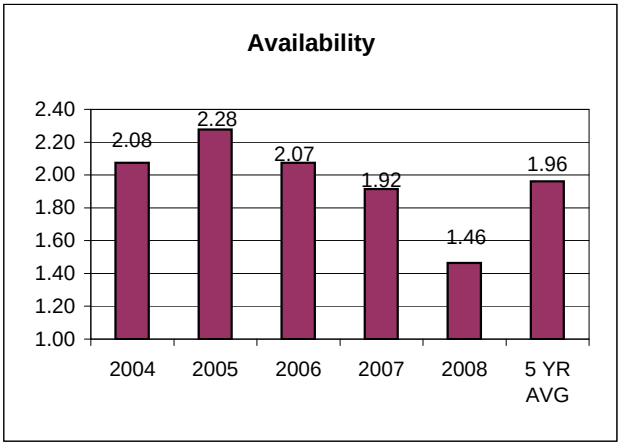
* LIPA is not regulated by the NYS PSC.

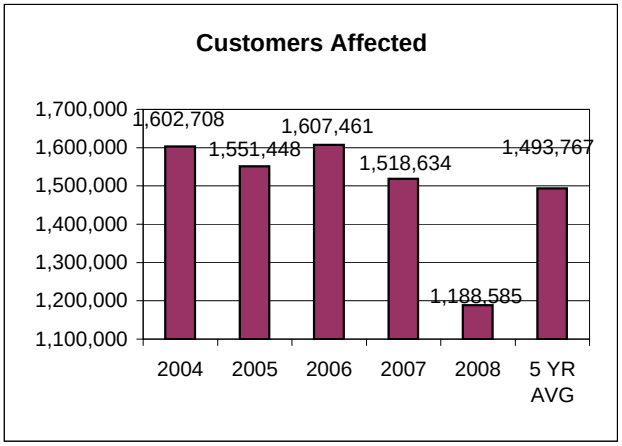
June, 2009

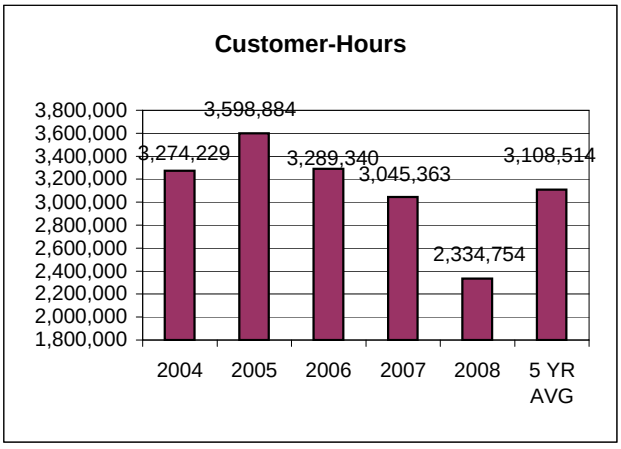
National Grid
(Excluding Major Storms)

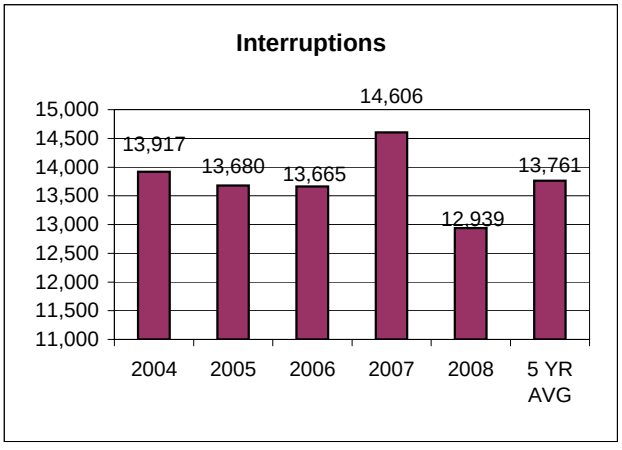












New York State Electric and Gas
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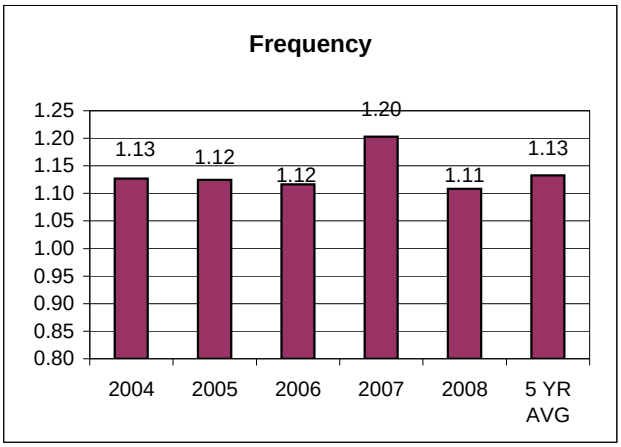

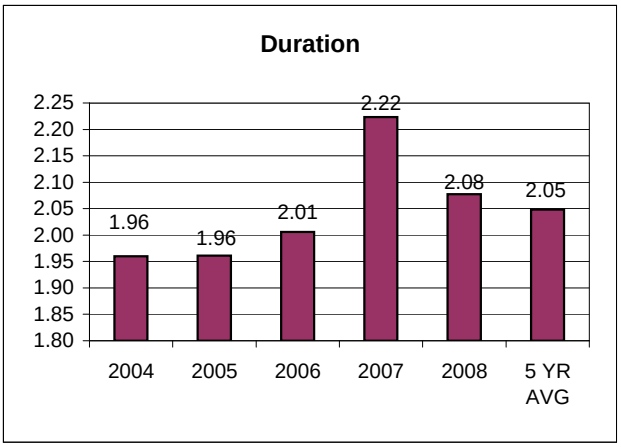

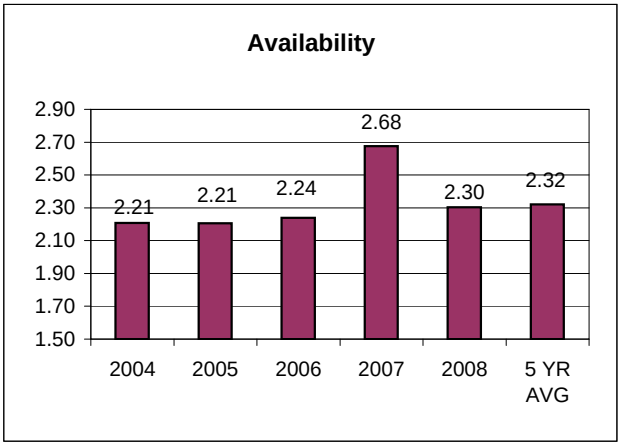

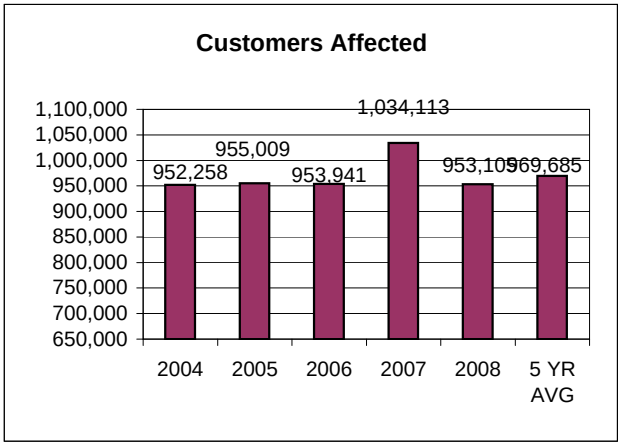

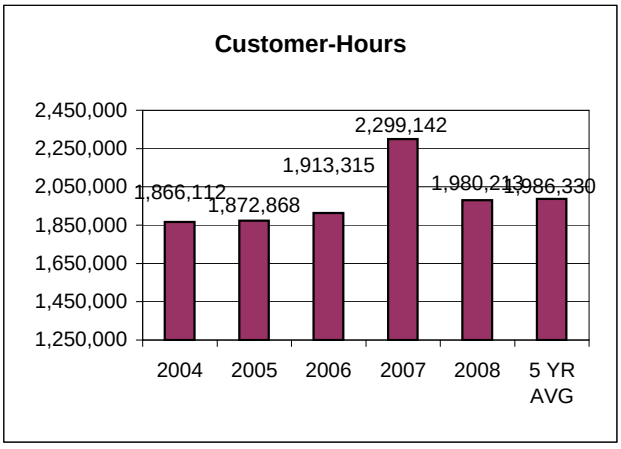

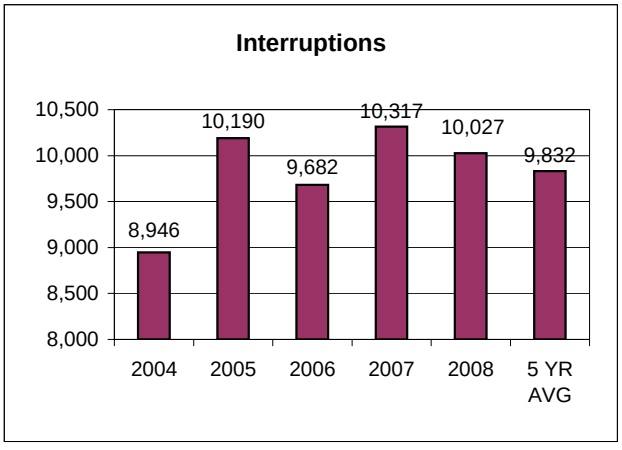

Orange and Rockland Utilities
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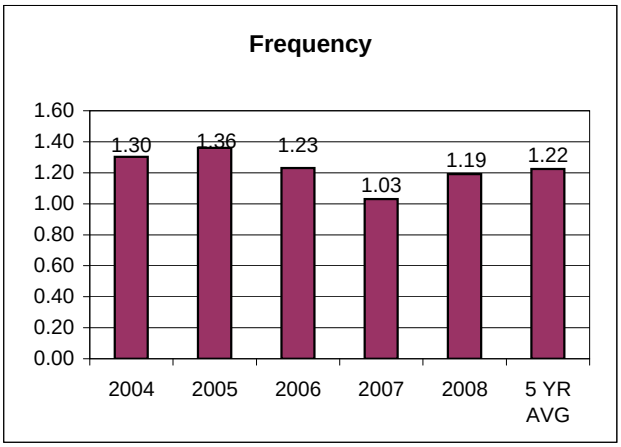

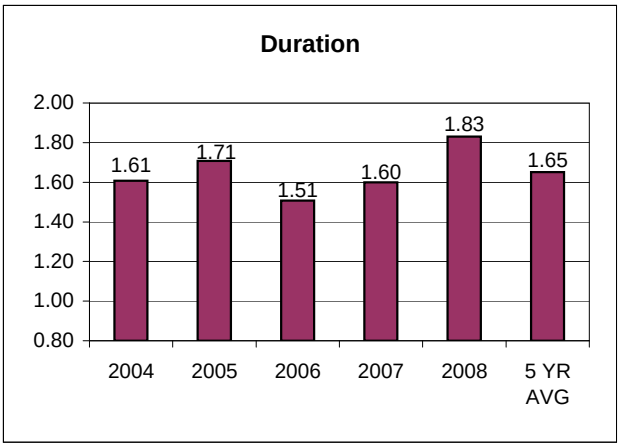

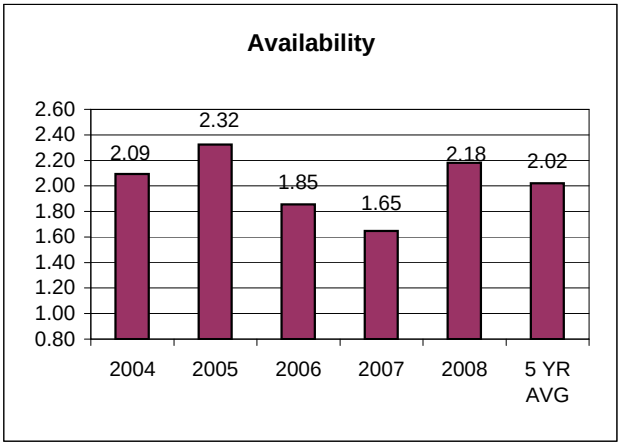

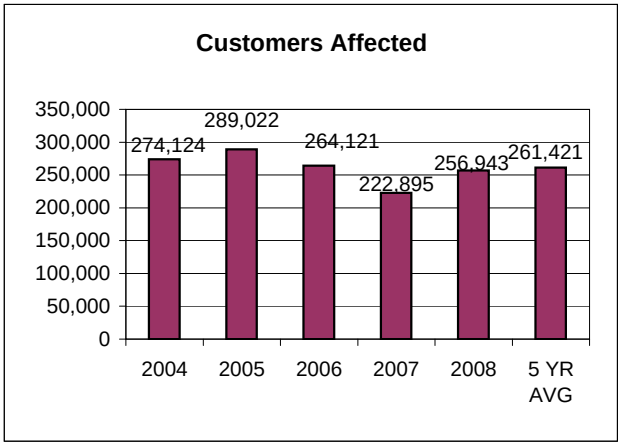

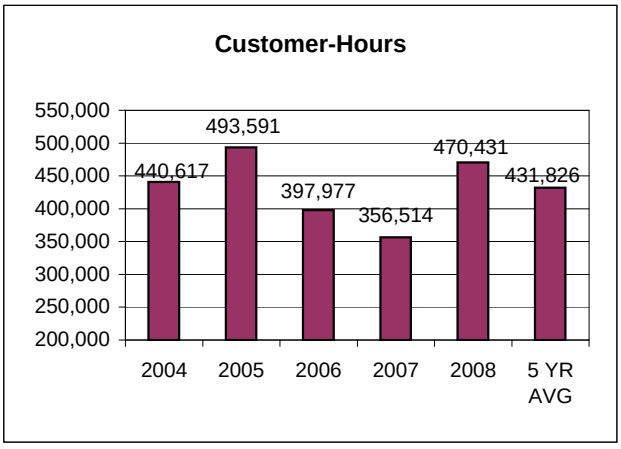

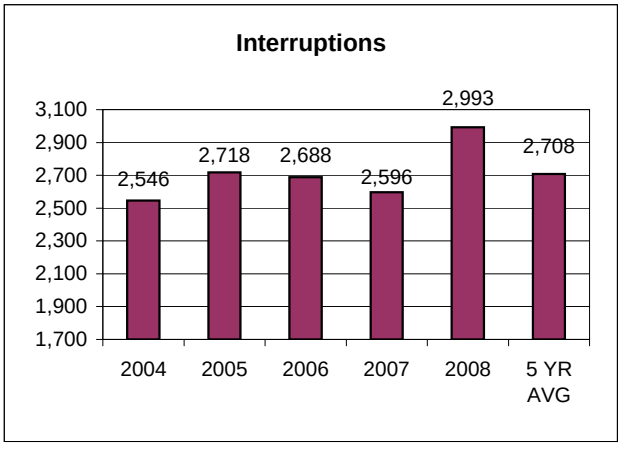

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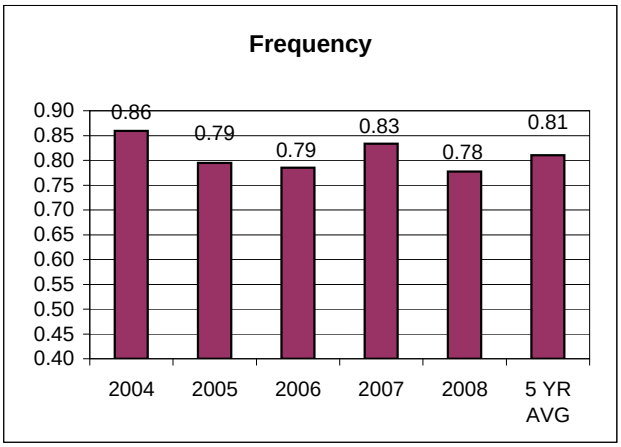
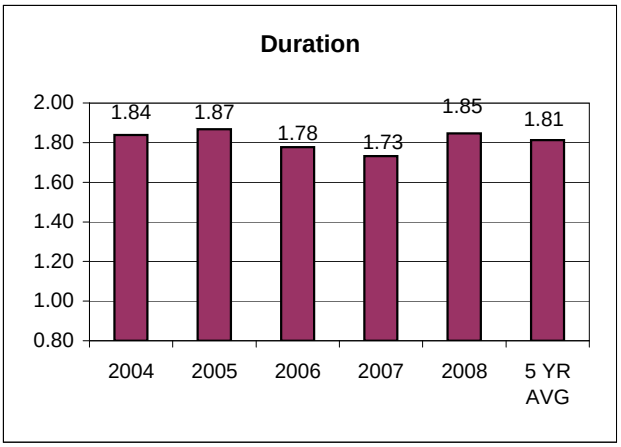
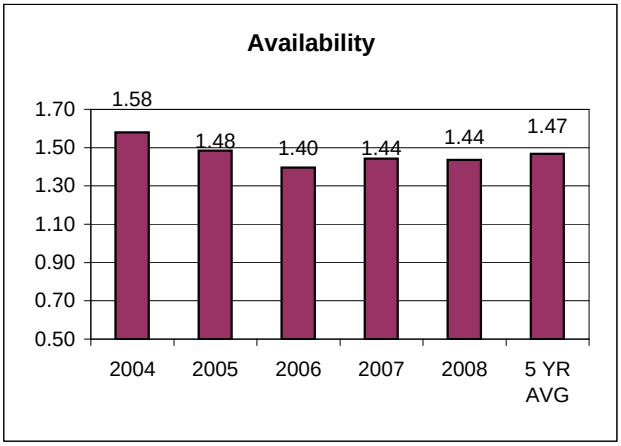
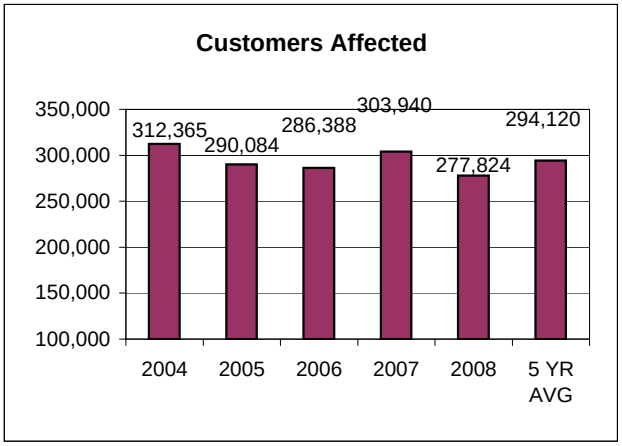
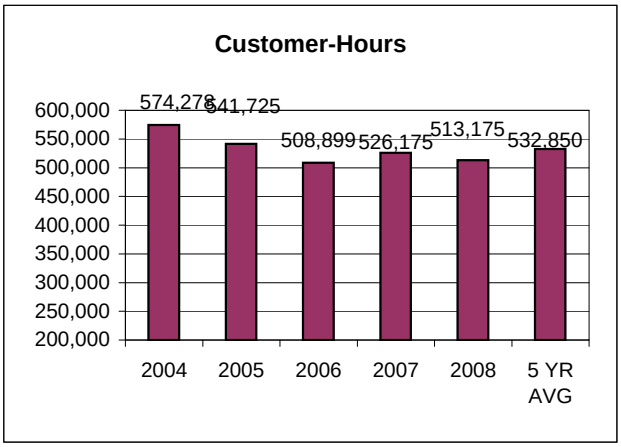
(Excluding Major Storms)

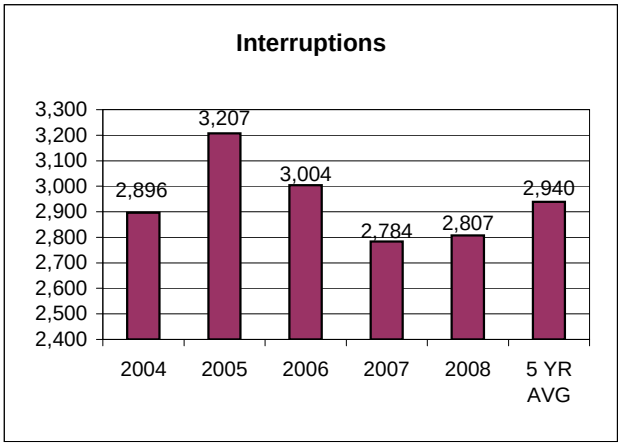








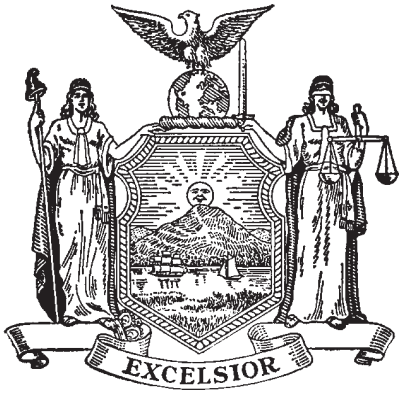




Filed Session of June 16, 2011

STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2010 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2011

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EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State for 2010. As a means of monitoring the levels of service, utilities are required to submit detailed monthly interruption data to the Public Service Commission (Commission). Staff primarily relies on two metrics commonly used in the industry to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] Frequency is influenced by factors such as system design, capital investment, maintenance, and weather.[2] Decisions made by utilities today on capital expenditures and maintenance policies, however, can take several years before being fully reflected in the frequency measure. Duration, on the other hand, is affected by work force levels, management of the workforce, and geography. By compiling the interruption data provided by the individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State. Recent data is also compared with historic performances to identify positive or negative trends. Finally, Staff reviews several other specific metrics that vary by utility to gauge electric reliability.

The statewide interruption frequency for 2010, excluding major storms, has been nearly identical for the past three years, and better than the five year average. Central Hudson Gas and Electric Corporation (Central Hudson) and Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) improved when compared with 2009. While the performances of the remaining four of the major electric companies were not as good as 2009 levels, they still performed satisfactorily and met the criteria in the performance mechanisms to which they were subject. For these companies, calendar year 2009 was also one of their best performing years in recent history.

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] To help achieve a balance between service interruptions under a utility's control, such as equipment failures, and those which a utility's control is more limited, such as an ice storm, we review reliability data both including and excluding severe weather events.

For the most part, duration performances were acceptable. Although, the statewide duration in 2010 was slightly worse than 2009, it was better than the five year average. In 2010, New York State Electric and Gas (NYSEG)'s and Rochester Gas and Electric (RG&E)'s duration was its best performance in the past five years.

Calendar year 2010 was historically one of the worst with respect to major storm effects. Three significant storms in the Hudson Valley and Downstate contributed to the entire State having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years.

With respect to individual utility performance in 2010, Consolidated Edison Company of New York's (Con Edison) generally performed satisfactorily. Due to concerns regarding the accuracy of the number of customers that were affected by an interruption in a network, we are now measuring network performance using two alternate measures: the number of interruptions per 1000 customers[3] and the average interruption duration. In 2010, Con Edison's network interruption performance was better than its 2009 performance, however, the Company's network interruption duration was worse in 2010 when compared to its 2009 performance. With regard to its radial system, Con Edison's radial system interruption frequency was nearly the same as its five year average. The radial system interruption duration performance declined compared to prior years, but was better than the five year average.

While NYSEG and RG&E had worse frequency performances in 2010 as compared with 2009, they are still much better than the Companies' respective performance targets. Outages associated with tree contacts and equipment failures continue to be a concern relative to NYSEG. In 2010, the companies have resumed investing in and maintaining their systems at more appropriate levels after low spending levels in 2009. As previously stated, the companies achieved their best duration performances of the past five years in 2010.

[3] An interruption is the loss of service for five minutes or more, for one or more customers. For example, a blown fuse that affects twelve customers is one interruption.

National Grid continues to perform well. The Company's recent infrastructure improvement and reliability focused programs are having a positive impact. Central Hudson's performance was better or consistent with its five year averages. Because of continuing tree issues, Central Hudson implemented a more rigorous tree trimming specification several years ago. Staff will perform field reviews of electric lines that are at or near the end of the first four-year trimming cycle. Orange and Rockland Utilities, Inc. (Orange and Rockland) performed satisfactorily with regard to interruption frequency, but not with respect to interruption duration. The Company has lacked consistency in its performances and Staff will be working with the Company to help reduce this variability.

All investor-owned electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The RPMs are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets. In 2010, Con Edison achieved the network outage duration metric and the remote monitoring system metric in its RPM only if the exclusions it is asserting are accepted by the Commission. Failure to achieve the performance levels set forth in these metrics may result in negative revenue adjustments of $5 million and $10 million, respectively. Con Edison is seeking exclusion of storm related outages and extraordinary circumstances in its Long Island City network, as permitted under certain circumstances in its RPM. If the exclusion is allowed, this would result in the Company meeting all RPM targets.[4] Orange and Rockland failed to achieve its interruption duration target in 2010, which would result in a negative revenue adjustment of $800,000. On March 16, 2011, Orange and Rockland filed a request for exemption for outages experienced during a storm on July 19, 2010. The request, if granted, improves the duration performance such that the Company would meet its target and not be subject to any negative revenue adjustments.[5] All of the other companies met their RPM targets.

[4] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

[5] Orange and Rockland's request for exemption has yet to be presented to the Commission for final action.

Overall, we are generally pleased with the steady electric reliability performance across the State. There are, however, individual concerns that are being addressed through various Staff efforts. This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water.

INTRODUCTION

This report provides an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service reliability, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission regarding electric service interruptions on a monthly basis.[6] The utilities provide interruption data that enables Staff to calculate two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information is grouped into 10 categories that delineate the nature of the cause of interruption (cause code).[7] Analysis of the cause code data enables the utilities and Staff to identify areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, arrestors could be installed on that circuit to try to minimize the effect of future lightning strikes. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which enables it to observe trends.

The Commission also adopted electric service standards addressing the reliability of electric service. The standards contain minimum acceptable performance levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31 of each year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing feeders. There are no revenue adjustments for failure

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause code covers events not entirely within in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report. The service standards were last revised in 2004.

In addition, utility performance is compared with utilities' RPMs established as part of the utilities' rate orders. RPMs are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The RPMs typically include targets for frequency and duration; some RPMs have additional measures to address specific concerns within an individual company.

2010 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities.[9] Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more. Major storm interruptions are excluded from the data used in calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Reliability performance data inclusive of major storms reflects the actual customer experience during a year.

Each year, Staff prepares an Interruption Report summarizing the monthly interruption data submitted by utilities. The 2010 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2010 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2010 and indicate company-specific trends where applicable.

Revenue adjustments for inadequate performance are implemented through individual RPMs which have been established in the utilities' rate orders.[10] Con Edison and Orange and Rockland failed to achieve targets in their reliability performance mechanisms for 2010. Con Edison failed to achieve the average interruption duration target for its network system and also failed its Remote Monitoring System target, resulting in a negative rate adjustment of $15 million. Orange and Rockland failed to achieve its interruption duration target, which results in a negative revenue adjustment of $800,000. The rate adjustments are preliminary assessments because both companies are

[9] Although LIPA is not regulated by the Commission, it supplies interruption data that is used to calculate statewide performance in this report.

[10] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

requesting exemptions, which are permitted under certain circumstances, and with which the companies would meet their targets and avoid any negative revenue adjustments.[11]

STATEWIDE

For many years, Staff has been combining individual utility performance statistics into overall statewide statistics. By doing so Staff is able to evaluate the level of reliability provided statewide and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks that are generally less prone to interruptions than overhead systems, its interruption frequency is extremely low (i.e., better) as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, Staff examines and presents aggregated data both including and excluding Con Edison's data.

Statewide, as may be seen in Figure 1, the frequency of interruptions excluding major storms was 0.57 in 2010; this is generally equivalent to the previous two years' performances and better than the five-year average. National Grid and Central Hudson had fewer customers affected by power outages in 2010 when major storms are excluded, while NYSEG, Con Edison, RG&E, and O&R had more customers affected. The frequency performance in 2010 for utilities other than Con Edison is 0.89, which is substantially the same as their frequency performance of 0.88 in 2008 and .090 in 2009, and better than the five-year average of 0.94.

[11] The requests have not been presented to the Commission for final action.

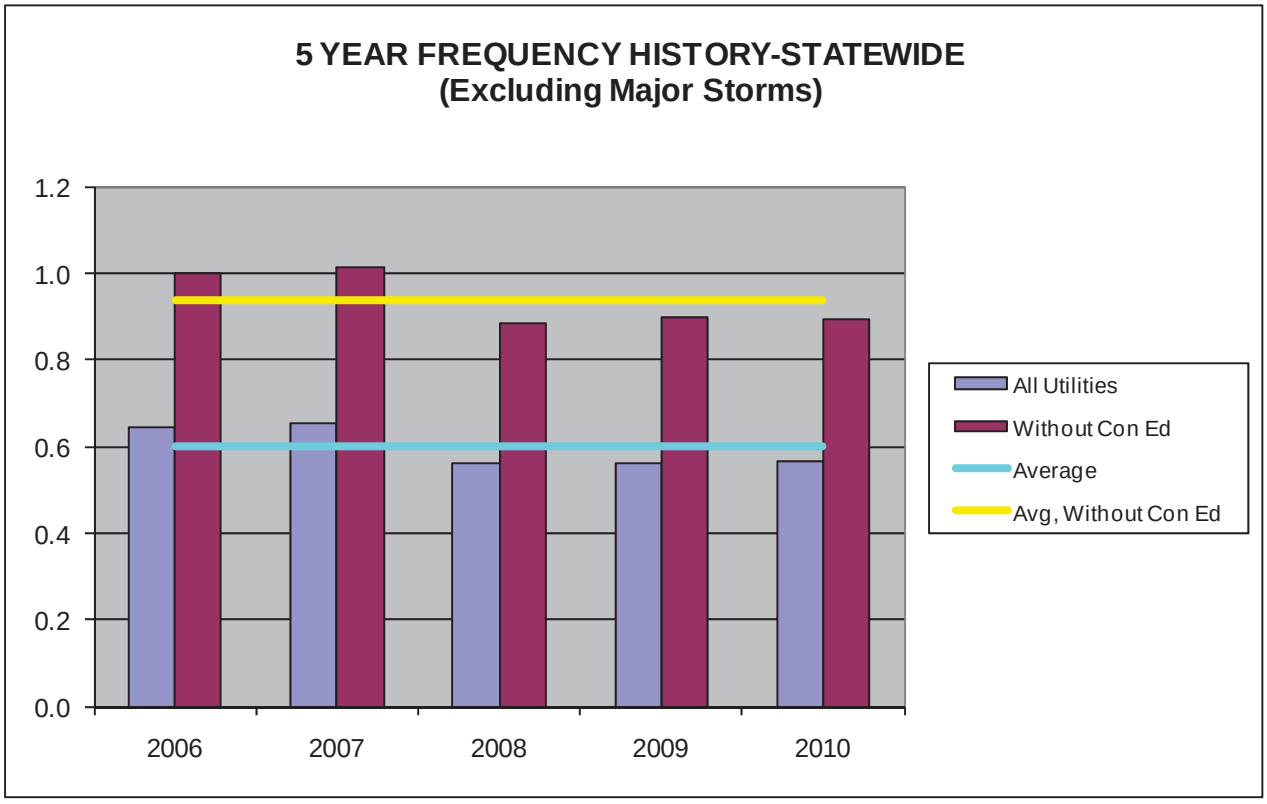


Figure 1: Statewide Frequency Performance

Figure 2 shows the historical statewide interruption duration index, excluding major storms. The 2010 overall statewide interruption duration index of 1.89 is slightly worse than 2009's 1.83, but is still consistent with the history of the past four years. When examining the chart, it should be kept in mind that Con Edison's Long Island City network outages in 2006 are still in the five year average. The statewide interruption duration index, excluding Con Edison, was 1.82 hours in 2010, which is the second best of the past five years.

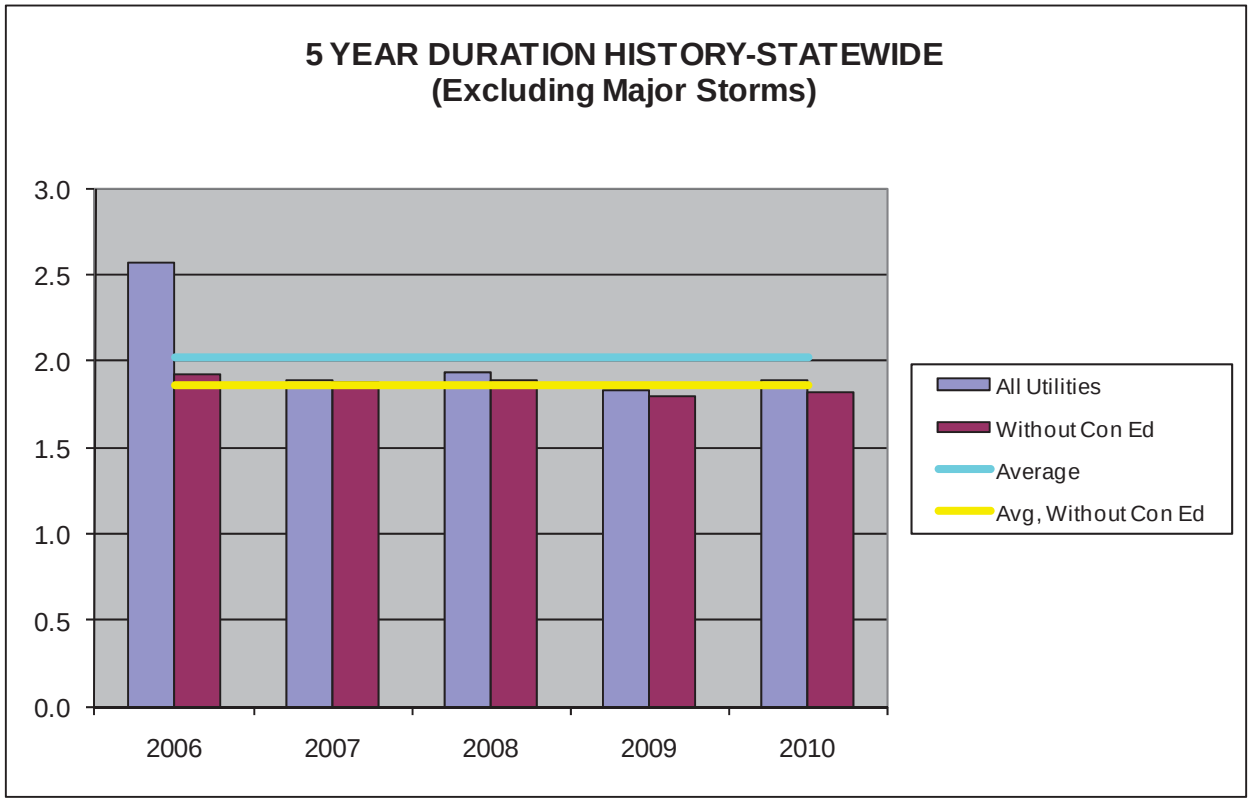


Figure 2: Statewide Duration Performance

While the overall number of major storms in 2010 was not atypical, three significant storms occurred in the Hudson Valley and Downstate. The three storms, summarized below, contributed to 2010 having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years (Figures 3 and 4, below). Because of the extended restoration times associated with these storms, the Commission requires the companies to file storm reports detailing restoration activities. [12] These reports were reviewed during the course of the year and determined that, in general, the utilities responded well.

- On February 23rd and 25th, heavy wet snow hit the Hudson Valley causing 300,000 customers to lose power. Central Hudson, Con Edison, NYSEG, and O&R were affected with overall restoration time exceeding a week. For Central Hudson, it was the worst storm in Company history since 1991, causing twice as much hours of customer interruption as Hurricane Floyd in 1999.

[12] 16 NYCRR Part 97, Part 105.4, requires utilities to file storm reports for outages lasting longer than three days.

- A March nor'easter swept the downstate area on March 3rd and affected 475,000 customers. Companies primarily affected were Con Edison, O&R, and LIPA. For Con Edison, it was the largest storm with respect to customer hours of interruption in Company history, with more than three times the amount experienced in Tropical Storm Ernesto in 2006.

- On September 16th, Tornados/Macrobursts hit downstate and affected Con Edison, O&R and LIPA, causing Con Edison 31,000 customers, mostly in Staten Island, Brooklyn and Queens, to lose power, some for extended times. The storms, while narrow in this geography, were notable in the magnitude of their destructiveness.

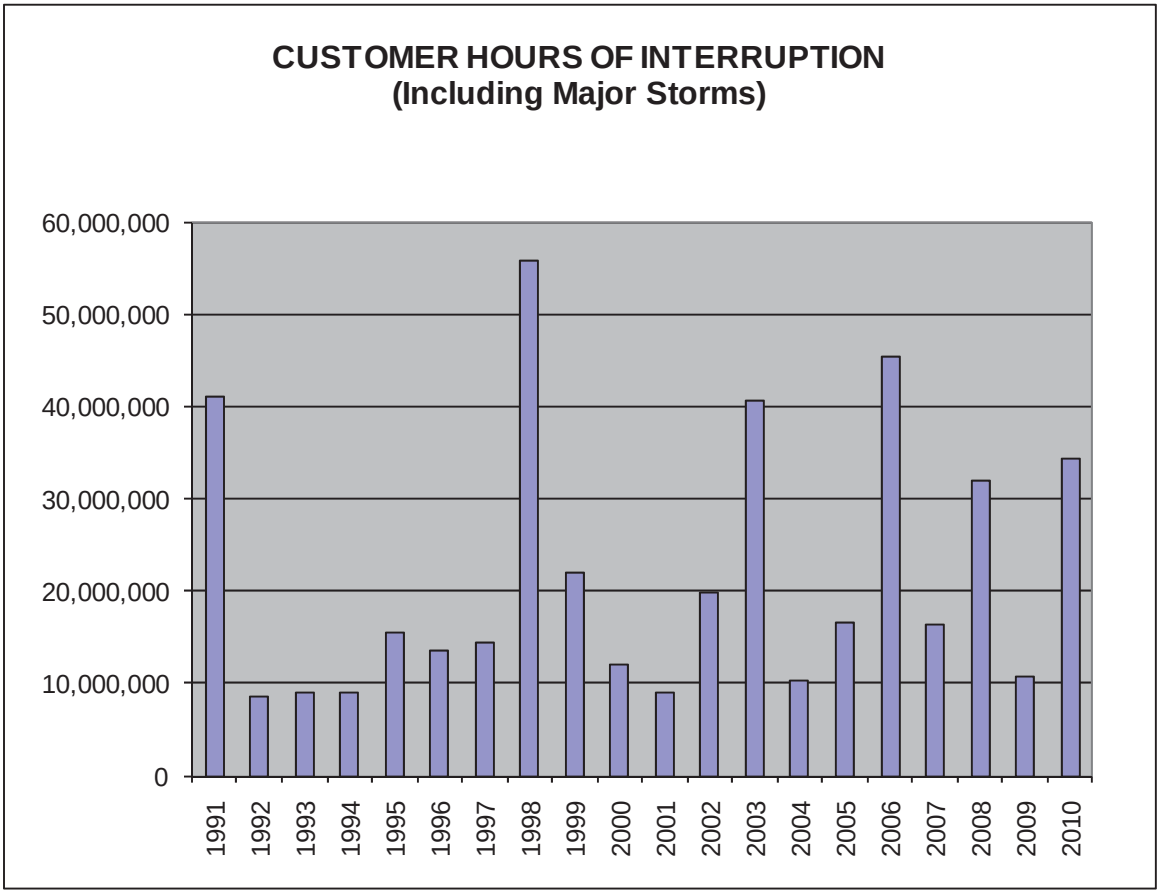


Figure 3: Customer Hours of Interruption (Including Major Storms)

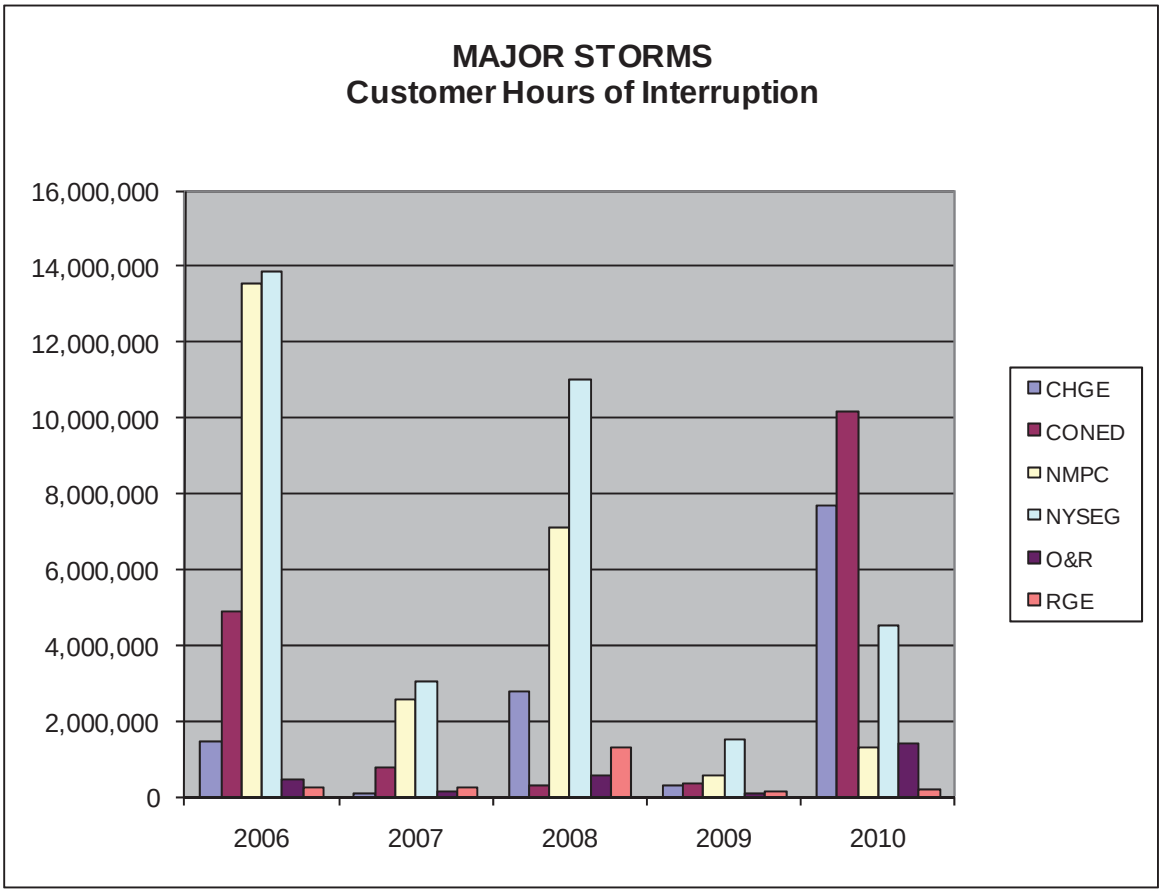


Figure 4: Major Storm Customer Hours

CON EDISON

Table 1: Con Edison's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Network Systems[13]						
Frequency				3.63	3.09	---
Duration				4.63	5.89	---
Radial System						
Frequency (SAIFI)	**0.54**	0.38	0.42	0.32	0.41	0.42
Duration (CAIDI)	**2.66**	**2.07**	1.83	1.74	1.95	2.05

Note: Data presented in red represents a failure to meet the RPM target for a given year.

[13] The duration and frequency metrics to measure network performance were replaced for 2009 with other measures.

Con Edison serves approximately 3.3 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design characteristics and underground settings, the majority of interruptions (78%) are associated with the service portion of the network system, as shown in Figure 5. Equipment failures (8%) are the next highest causes for interruptions in 2010 followed by Mains (7%).

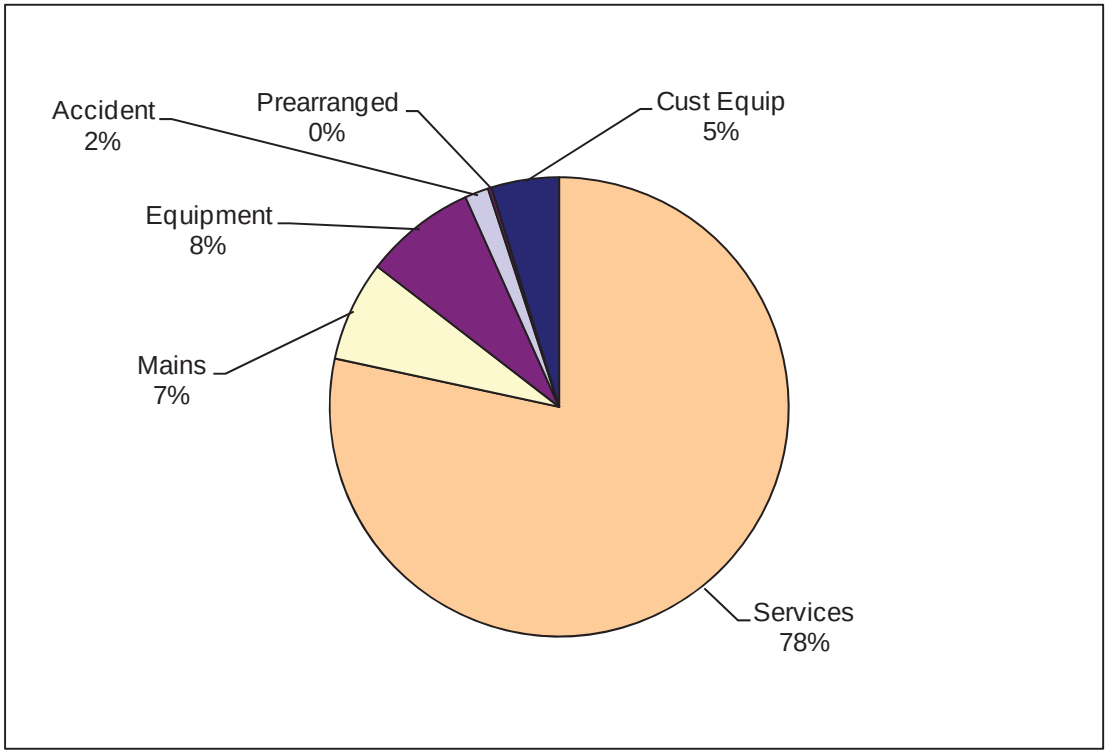


Figure 5: Con Edison's 2010 Network Interruptions by Cause

Due to concerns regarding the accuracy of the number of customers affected by an interruption in a network, we are now measuring network performance using two measures: the number of interruptions per 1000 customers and the average interruption duration. By using measures that are not based on the number of customers affected, we are able to monitor and trend network reliability performances without questioning the validity of the measures. In 2010, Con Edison's network interruptions

metric was better than its 2009 performance. The Company also achieved its RPM network interruption target for the past two years. With regard to duration, Con Edison performed worse in 2010 when compared to its 2009 performance. The Company did not meet its RPM target for average interruption duration in 2010. Con Edison is seeking exclusion of storm related outages from its interruption performance levels. It also failed to achieve the remote monitoring system metric in its RPM, but is seeking an exclusion due to extraordinary circumstances with regard to the Remote Monitoring System (RMS) criteria for its Long Island City network. If these exclusions are granted, the Company would meet the targets and not incur any negative revenue adjustment. [14]

On its radial system, Con Edison's frequency in 2010 of 0.41 was worse than 2009's performances and nearly equal to its five year average. The Company met its RPM frequency target of 0.495 for 2010. Equipment failures are responsible for 75% of the interruptions on the radial system, followed by trees and accidents at 9% and 8%, respectively, as shown in Figure 6.

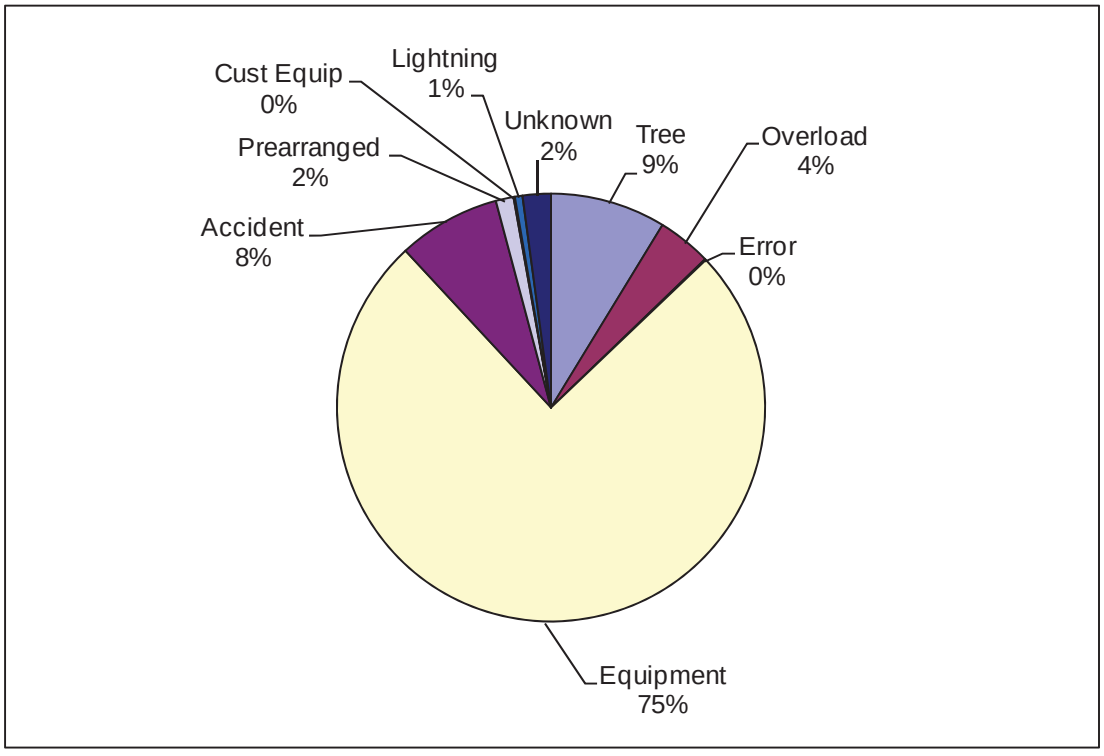


Figure 6: Con Edison's 2010 Radial Interruptions by Cause

[14] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

With respect to duration, Con Edison's radial performance in 2010 was worse than the previous two years. While the Company passed its RPM target of 2.04, duration performance is something we and the Company are monitoring closely. In response to a self-assessment recommended by Staff, Con Edison developed and implemented duration improvement strategies for both its radial and network system. To improve crewing efficiency and reduce outage duration, the Company has increased use of first responder staffing, increased the ability to mobile dispatch work to crews, and improve training resources. Con Edison stated that enhancements have been made to the process utilized for its outage management system to flag large outage jobs, and it now employs an automatic call out process for additional crews. The Company also continues to improve the reliability of its system by installing switches and other rapid restoration technologies. Given the focus and efforts Con Edison has put into place regarding duration, we believe 2010's performance is acceptable.

NATIONAL GRID

Table 2: National Grid's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.01**	**0.96**	0.75	0.88	0.80	0.88
Duration (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's 25,000 square mile territory includes metropolitan areas, such as the cities of Buffalo, Albany, and Syracuse, as well as many rural areas in northern New York and the Adirondacks.

In 2010, National Grid achieved both its reliability targets, comprising three consecutive years of positive performance. The Company's frequency level of 0.80 in 2010 improved as compared with 0.88 in 2009, and is well below its frequency target level of 0.93. The duration performance for 2010 was worse than 2009, but equal to its historic five-year average, and better than its duration target of 2.07 for five consecutive

years. National Grid also provided consistent service on a region by region basis. In 2010, the Company's Northeast division failed to achieve its duration expectation and the Capital Region barely missed its frequency expectation. As previously discussed, the divisional expectations are defined by our Electric Service Standards.

Historically, equipment failures were National Grid's leading cause of interruptions. Aged equipment, leading to poor frequency performances in mid 2000 necessitated the Company's significant investment in capital improvement projects aimed at improving reliability. As a result of the upgrades and modifications to its distribution system, the percentage of interruptions caused by equipment failures is now less than tree related electric service interruptions for 2010 (see Figure 7, below). It should be noted, however, that tree-related outages were worse in 2009 and 2010 when compared to historic interruption rates. Analysis of the data indicates that the increase in tree related interruptions is attributable to increased broken limb conditions. Interruptions caused by re-growth and danger trees, however, were both lower in 2010 than in 2009. As a result, National Grid is not recommending changes to its five year trimming cycle or hazard tree removal program. To help reduce it tree-related outages, National Grid is doing additional off-cycle trimming and trimming on worst performing circuits in 2011.

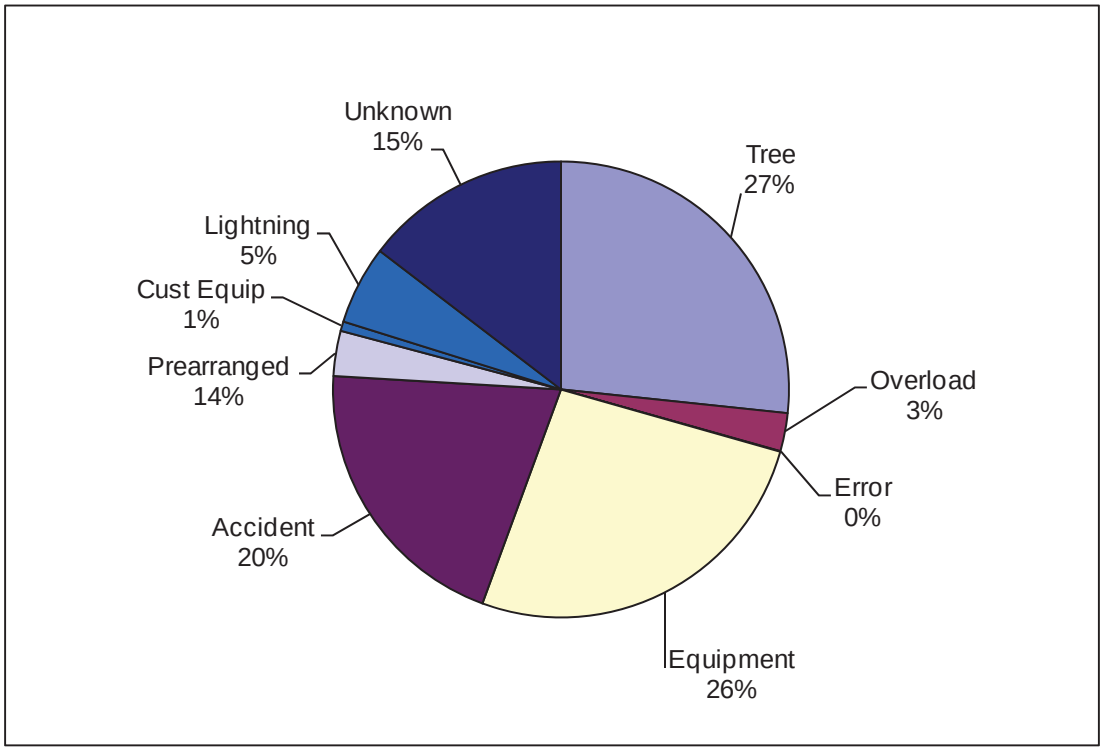


Figure 7: National Grid's 2010 Interruptions by Cause

In addition to improved performance on equipment failures, National Grid has decreased the number of customers affected when a failure occurs (see Table 3). The average number of customers affected by an interruption has been reduced from over 100 customers per interruption to approximately 90 customers per interruption in each of the last three years. National Grid credits the reduction to its effort to sectionalize lines via recloser and side tap fuse installations. National Grid's Line Recloser Program installs 100 additional reclosers per year and is expected to continue to limit the number of customers affected by a single interruption.

Table 3: National Grid's Historic Customers Affected per Interruption

	2006	2007	2008	2009	2010
Average number of customers affected per interruption	118	104	92	87	92

National Grid now uses a system that establishes repair work orders in direct response to inspection findings. Based on its success in repairing deteriorated items under its inspection and maintenance, National Grid will be discontinuing focused programs, such as the Pole Replacement Program and Feeder Hardening Program in 2011. While these programs were helpful in reducing National Grid's frequency performance over the past years, it is appropriate for the Company to consolidate its efforts in the interest of prioritizing and scheduling efficiencies. We expect that National Grid will continue to address reliability concerns on worst performing feeders, either through engineering reliability reviews or alternate methods, and maintain at least the current level of performance in future years.

NEW YORK STATE ELECTRIC AND GAS

Table 4: NYSEG's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13
Duration (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06

Approximately 858,269 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

NYSEG's frequency performance of 1.14 was worse when compared with 2009's performance of 1.08, but nearly the same as the five year average. The 2010 duration performance of 1.98 was the best in the past five years. Overall, NYSEG's performance is satisfactory and the Company was able to meet its RPM reliability targets of 1.20 for frequency and 2.08 for duration.

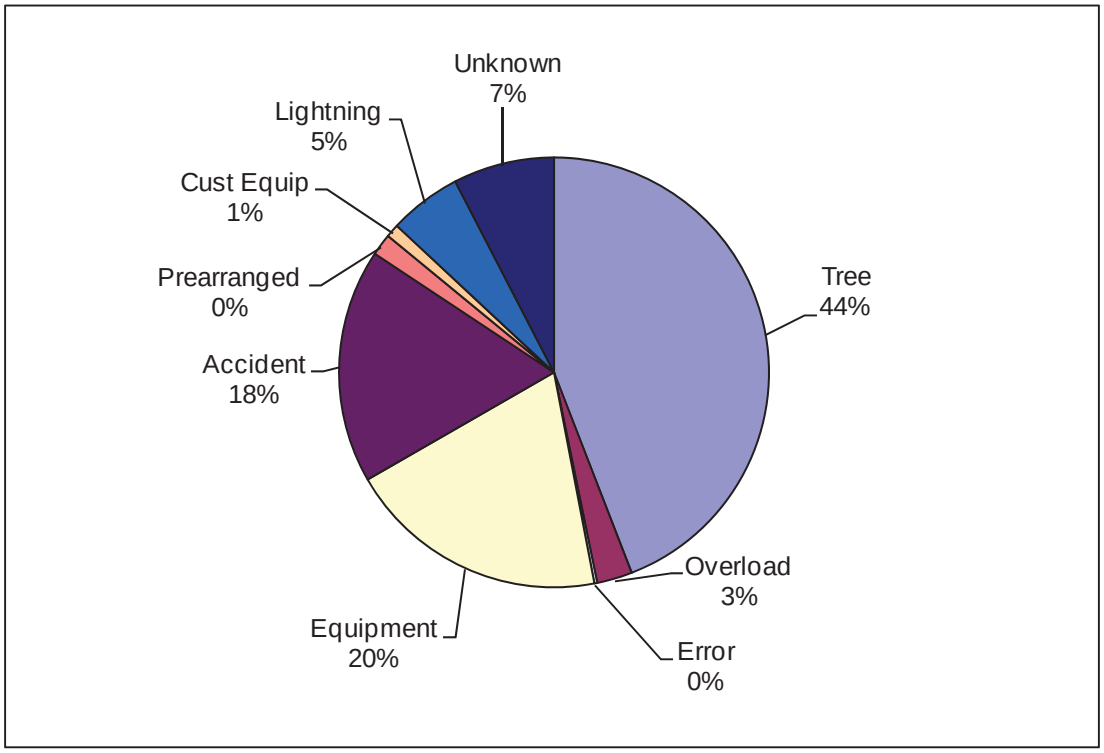


Figure 8: NYSEG's 2010 Interruptions by Cause

As shown in Figure 8, tree contacts (44%), equipment failures (20%), and accidents (18%) remain the predominant causes of interruption throughout NYSEG's twelve operating divisions in 2010. NYSEG has one of the worst frequency rates which is caused primarily by customers affected by tree interruptions. As a result, NYSEG needs to continue to focus on improving its distribution vegetation management program and reducing tree related outages. The Commission approved increased funding for distribution vegetation management activities as part of its last 2010 rate case agreement to help move NYSEG towards full cycle trimming activities. Therefore, Staff expects NYSEG to address the issue of tree trimming more aggressively and undertake measures to identify and perform trimming in areas where tree related outages are more frequent.

Equipment failures are NYSEG's second major cause for interruption. For the past two years, it accounted for 20% of the total number of interruptions. NYSEG has been addressing equipment failures under its Transmission and Distribution Infrastructure Replacement Program (TDIRP) program. The TDIRP program replaces electrical T&D equipment based on the condition, age, and failure characteristics of the specific item based on the Company's experience and knowledge. Funding for the

TDIRP program was reduced significantly in 2009 to approximately $6.0 million from historical levels of approximately $23 million annually.[15] In 2010, NYSEG began to invest in its system at close to or higher than historic levels. The most recent rate case supported $25 million in expenditures for the TDIRP efforts annually, to bring the Company back up to pre 2009 spending levels. The reinvestment into this program is expected to help reduce outages related to equipment failures and improve the system reliability on a going forward and proactive basis. Staff will continue to monitor the Company's performance on these issues.

ROCHESTER GAS AND ELECTRIC

Table 5: RG&E's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74
Duration (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77

RG&E serves approximately 358,109 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better utilities in the state by continually performing better than its RPM targets of 0.90 for frequency and 1.90 for duration, as established in its rate orders. As shown in Table 5, RG&E's performance for frequency and duration is fairly consistent with its five year average. The Company's frequency performance of 0.71 in 2010 was an increase from 0.59 in 2009; however, the 2009 performance was the best in the past five years. RG&E's duration performance of 1.71 in 2010 was better than in 2009 and better than the five-year average.

[15] In 2009, the Company reduced all expenditures to essential needs only while stating financial issues within the Company as the reasoning behind the reduced spending.

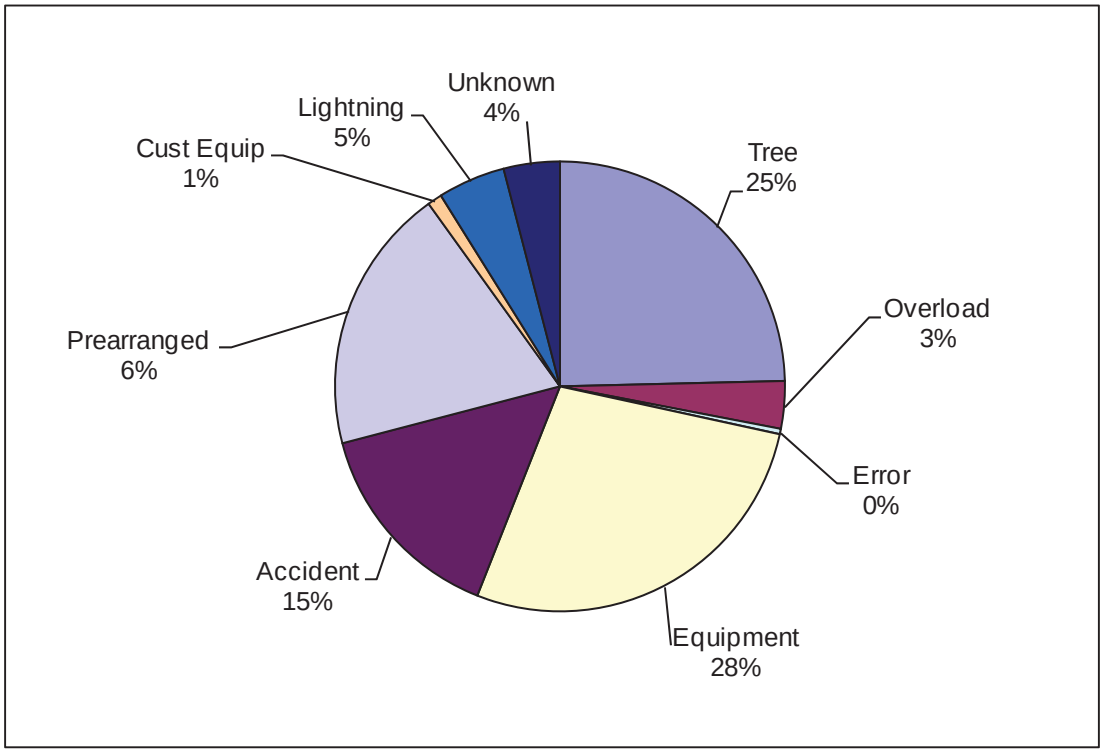


Figure 9: RG&E's 2010 Interruptions by Cause

Figure 9 shows that the two major contributors to interruptions in 2010 continue to be equipment failures (28%) and tree contacts (25%). Similar to NYSEG, funding for RG&E's Transmission and Distribution Infrastructure Replacement Program (TDIRP) was reduced due to Company financial issues in 2009 and the beginning of 2010. In the last rate case, the Commission supported expenditures for the TDIRP efforts, in the amount of $15 million annually, to bring the Company back up to pre 2009 spending levels. Likewise, the Commission also supported increased expenditures for vegetation management, in the amount of $6.6 million annually, allowing the Company to implement a full system vegetation management (tree trimming) cycle program. Staff believes that these two programs and associated expenditures will help reduce outages and improve the system reliability going forward on proactive basis.

CENTRAL HUDSON GAS AND ELECTRIC

Table 6: Central Hudson's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.59**	1.42	1.27	1.37	1.27	1.38
Duration (CAIDI)	**2.58**	2.43	2.47	2.22	2.42	2.43

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh.

Central Hudson's frequency performance of 1.27 in 2010 was better than 2009 and ties its five-year best. The Company's duration performance of 2.42 in 2010, on the other hand, was slightly better than average. Figure 10 shows that 38% of customer interruptions were due to tree related issues, followed by accidents which comprised 25%. In 2010, the Company achieved its RPM targets of 1.45 for frequency and 2.50 for duration.

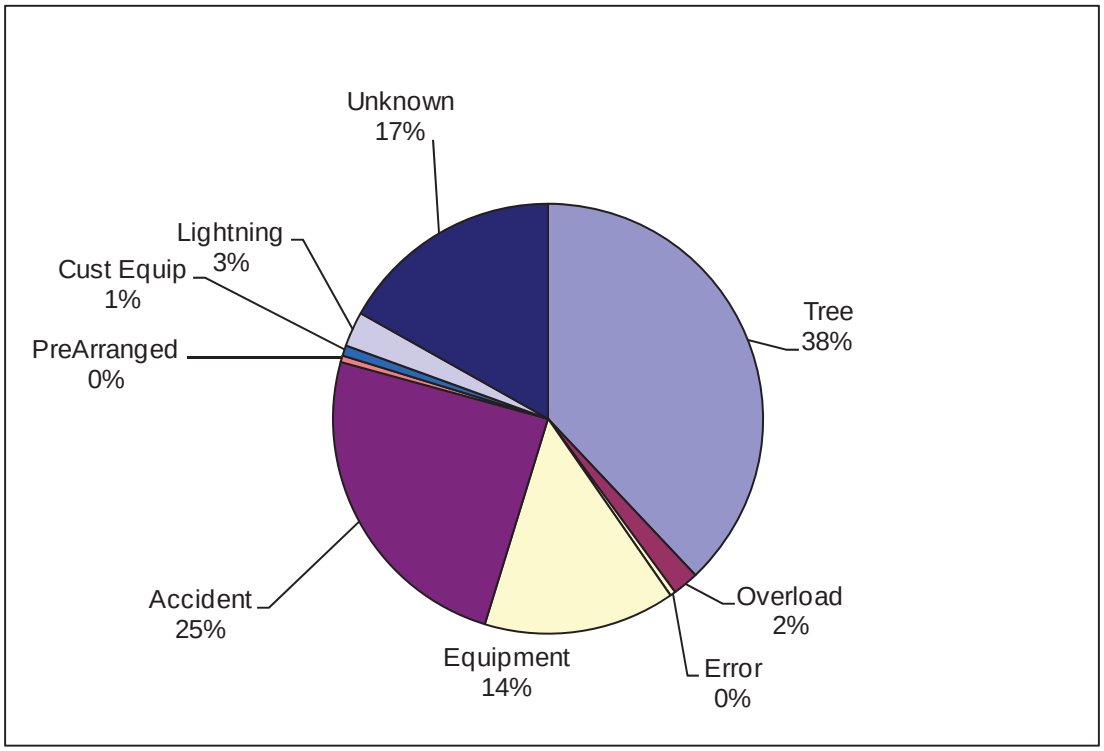


Figure 10: Central Hudson's 2010 Interruptions by Cause

As is the case with most overhead distribution utilities, trees are a primary cause of outages (Figure 10, above). The Company as a whole suffers more tree interruptions per customer served than any other major New York electric utility. Since 2007 Central Hudson has done vegetation line clearance in accordance with a new, improved specification. Using greater level of detail available to it, the Company reports a trend of decreasing interruptions resulting from trees falling inside its trimming zone. Staff will follow-up this summer with the Company and perform field reviews of electric lines that are at or near the end of the four-year trimming cycle.

The Unknown and Accident categories historically make up large portions of electric interruptions for all New York utilities, and this is the case for Central Hudson as well. Staff will be looking more closely with the Company at these classifications of outages to see if the Company's performance can be improved.

Equipment failures cause a large number of electric interruptions as is the case with most electric utility companies. Central Hudson is continuing several programs to decrease the number of these interruptions, including programs for substation breaker replacement, porcelain cutout replacement, 14kV paper and lead cable replacement, automatic load transfer switch installation, and aging recloser replacement (including remote communication). In addition, the Company has a program to upgrade individual circuits.

ORANGE AND ROCKLAND

Table 7: O&R's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.23	1.03	1.19	0.96	1.21	1.13
Duration (CAIDI)	1.51	1.60	**1.83**	1.66	**1.79**	1.68

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland serves approximately 218,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2010, the

Company met its reliability performance mechanism target of 1.36 for frequency with a frequency of 1.21; however, it failed to achieve the duration target of 1.70 with a 1.79 performance.[16] As the table above shows, the 2010 frequency and duration performance levels were both much worse than last years and continue ORU's sporadic performance trend from year to year. The 2010 results were worse than the 5 year averages and are similar to those in 2008 when the Company again failed to achieve its duration target. Staff will continue to work with the Company to help reduce the variability in performances.

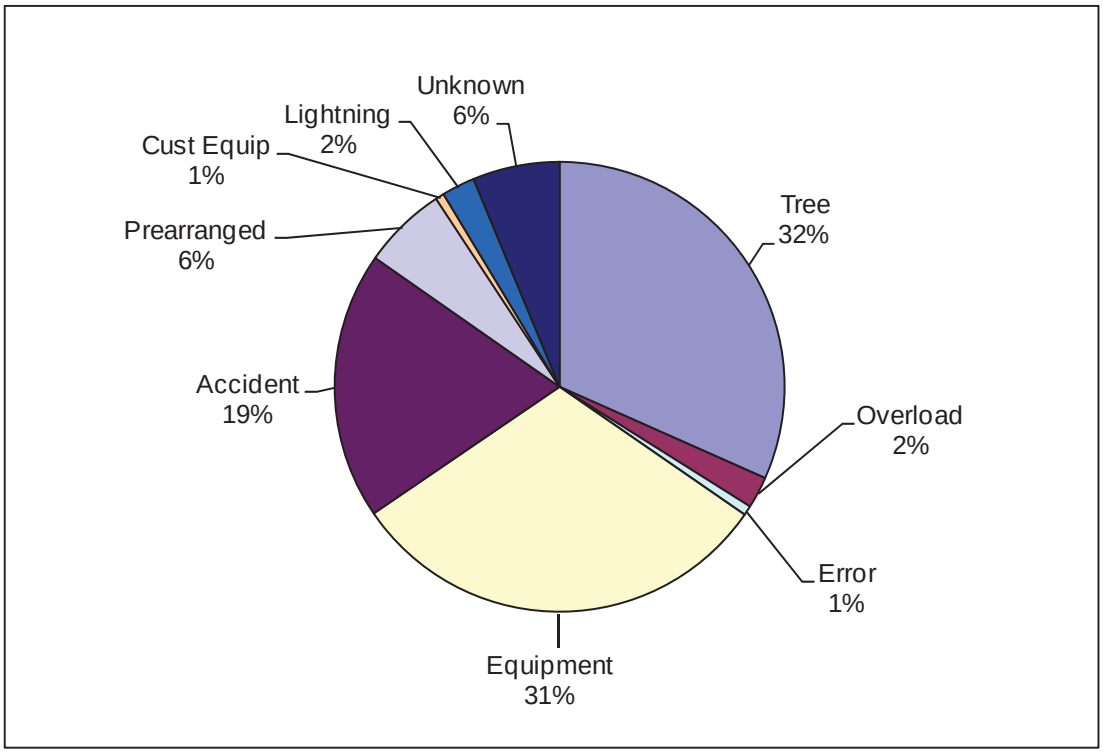


Figure 11: Orange and Rockland's 2010 Interruptions by Cause

As shown in Figure 11, tree contacts (32%) and equipment failures (31%) caused the majority of interruptions in 2010. Orange and Rockland is addressing reliability issues resulting from equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable

[16] The Company has filed a petition to the Commission for exemption from the RPM revenue adjustment, related to a storm that affected its Eastern Division on July 19, 2010. This petition has not been acted on by the Commission.

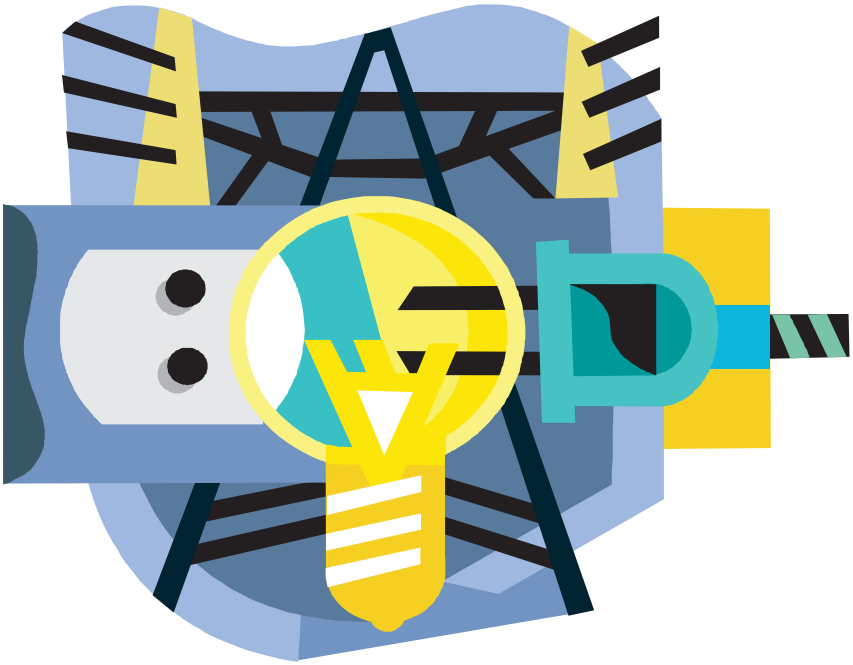
Maintenance and Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

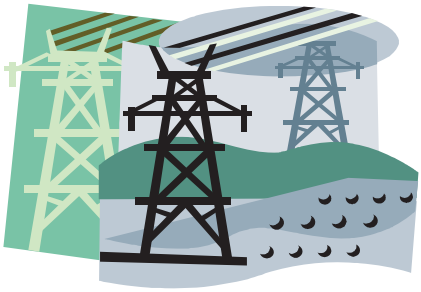
The Company continues to address concerns regarding tree-related outages through increased efforts on its line clearance programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify and perform supplemental trimming to address areas with recurring tree related outages. These programs are expected to reduce the impact of tree contacts on the Company's electrical system through the coming years.

APPENDIX

2010 INTERRUPTON REPORT

The 2010 Interruption Report





Office of Electricity, Gas, and Water

June 2011

June 2011

ATTACHMENT
Definitions and Explanations of Terms Used in the 2010
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2010**, customers served is the number of customers as of 12/31/2010. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2009.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	1.59	1.42	1.27	1.37	1.27	1.38
DURATION	2.58	2.43	2.47	2.22	2.42	2.43
CONED						
FREQUENCY	0.16	0.16	0.13	0.10	0.13	0.13
DURATION	8.23	1.97	2.27	2.27	2.57	3.46
LIPA *						
FREQUENCY	0.75	0.90	0.77	0.74	0.73	0.78
DURATION	1.37	1.20	1.36	1.17	1.11	1.24
NAT GRID						
FREQUENCY	1.01	0.96	0.75	0.88	0.80	0.88
DURATION	2.05	2.01	1.96	1.91	1.98	1.98
NYSEG						
FREQUENCY	1.12	1.20	1.11	1.08	1.14	1.13
DURATION	2.01	2.22	2.08	2.00	1.98	2.06
O&R						
FREQUENCY	1.23	1.03	1.19	1.03	1.21	1.14
DURATION	1.51	1.60	1.83	1.67	1.79	1.68
RG&E						
FREQUENCY	0.79	0.83	0.78	0.59	0.71	0.74
DURATION	1.78	1.73	1.85	1.80	1.71	1.77
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.00	1.02	0.88	0.90	0.89	0.94
DURATION	1.92	1.88	1.89	1.79	1.82	1.86
STATEWIDE (WITH CONED)						
FREQUENCY	0.65	0.65	0.56	0.56	0.57	0.60
DURATION	2.57	1.89	1.93	1.83	1.89	2.02

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	2.20	1.51	2.15	1.63	2.62	2.02
DURATION	4.12	2.51	5.76	2.48	10.94	5.16
CONED						
FREQUENCY	0.23	0.18	0.14	0.11	0.23	0.18
DURATION	12.31	3.12	2.71	3.06	15.05	7.25
LIPA *						
FREQUENCY	1.18	1.04	1.09	0.81	1.04	1.03
DURATION	1.99	1.37	1.65	1.25	1.84	1.62
NAT GRID						
FREQUENCY	1.48	1.31	1.37	1.01	0.98	1.23
DURATION	7.18	2.70	4.32	2.01	2.46	3.74
NYSEG						
FREQUENCY	1.79	1.71	2.14	1.47	1.84	1.79
DURATION	10.32	3.62	7.07	2.68	4.09	5.55
O&R						
FREQUENCY	1.81	1.17	1.64	1.15	1.79	1.51
DURATION	2.15	1.92	2.94	1.89	4.76	2.73
RG&E						
FREQUENCY	0.98	1.16	1.36	0.74	0.79	1.01
DURATION	2.14	1.80	3.77	2.03	2.18	2.38
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.49	1.31	1.51	1.07	1.29	1.34
DURATION	6.02	2.56	4.62	2.09	4.09	3.87
STATEWIDE (WITH CONED)						
FREQUENCY	0.96	0.83	0.93	0.67	0.84	0.85
DURATION	6.65	2.61	4.50	2.16	5.35	4.25

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	55,211	55,425	53,758	55,995	54,310	54,940
Number of Customer-Hours	8,439,916	8,439,464	7,399,179	7,116,848	7,197,156	7,718,512
Number of Customers Affected	4,400,072	4,495,428	3,910,426	3,976,492	3,962,829	4,149,049
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	1.92	1.88	1.89	1.79	1.82	1.86
Average Duration Per Customers Served	1.91	1.91	1.67	1.61	1.62	1.74
Interruptions Per 1000 Customers Served	12.52	12.51	12.12	12.65	12.24	12.41
Number of Customers Affected Per Customer Served (SAIFI)	1.00	1.02	0.88	0.90	0.89	0.94

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	65,752	66,746	65,403	70,930	68,221	67,410
Number of Customer-Hours	12,603,322	9,429,452	8,326,562	7,891,155	8,284,480	9,306,994
Number of Customers Affected	4,905,844	4,996,967	4,319,550	4,316,932	4,385,672	4,584,993
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	2.57	1.89	1.93	1.83	1.89	2.02
Average Duration Per Customers Served	1.66	1.23	1.08	1.03	1.07	1.21
Interruptions Per 1000 Customers Served	8.66	8.73	8.52	9.21	8.83	8.79
Number of Customers Affected Per Customer Served (SAIFI)	0.65	0.65	0.56	0.56	0.57	0.60

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	70,872	61,753	73,150	61,841	72,135	67,950
Number of Customer-Hours	39,413,242	14,848,512	30,962,269	9,923,723	23,466,391	23,722,827
Number of Customers Affected	6,548,910	5,808,516	6,705,414	4,752,148	5,741,806	5,911,359
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	6.02	2.56	4.62	2.09	4.09	3.87
Average Duration Per Customers Served	8.94	3.35	6.98	2.24	5.29	5.36
Interruptions Per 1000 Customers Served	16.08	13.94	16.50	13.97	16.25	15.35
Number of Customers Affected Per Customer Served (SAIFI)	1.49	1.31	1.51	1.07	1.29	1.34

STATEWIDE (WITH CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	86,734	74,261	85,548	77,181	91,471	83,039
Number of Customer-Hours	48,437,221	16,630,252	32,188,186	11,046,399	34,693,862	28,599,184
Number of Customers Affected	7,282,114	6,379,276	7,158,329	5,118,841	6,487,588	6,485,230
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	6.65	2.61	4.50	2.16	5.35	4.25
Average Duration Per Customers Served	6.38	2.17	4.19	1.44	4.49	3.73
Interruptions Per 1000 Customers Served	11.42	9.71	11.14	10.03	11.83	10.83
Number of Customers Affected Per Customer Served (SAIFI)	0.96	0.83	0.93	0.67	0.84	0.85

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

CENTRAL HUDSON
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	7,538	6,386	6,857	6,705	7,762	7,050
Number of Customer-Hours	1,201,109	1,021,859	933,993	910,250	922,392	997,921
Number of Customers Affected	464,765	420,769	377,564	410,516	380,489	410,821
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	2.58	2.43	2.47	2.22	2.42	2.43
Average Duration Per Customers Served	4.10	3.46	3.13	3.03	3.08	3.36
Interruptions Per 1000 Customers Served	25.74	21.62	22.98	22.30	25.91	23.71
Number of Customers Affected Per Customer Served (SAIFI)	1.59	1.42	1.27	1.37	1.27	1.38

CENTRAL HUDSON
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,066	6,681	9,887	7,609	11,994	9,247
Number of Customer-Hours	2,649,690	1,117,802	3,705,277	1,211,827	8,597,567	3,456,433
Number of Customers Affected	643,778	444,813	642,949	488,732	785,806	601,216
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	4.12	2.51	5.76	2.48	10.94	5.16
Average Duration Per Customers Served	9.05	3.78	12.42	4.03	28.70	11.60
Interruptions Per 1000 Customers Served	34.38	22.62	33.13	25.31	40.04	31.10
Number of Customers Affected Per Customer Served (SAIFI)	2.20	1.51	2.15	1.63	2.62	2.02

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,541	11,321	11,645	14,935	13,911	12,471
Number of Customer-Hours	4,163,407	989,988	927,383	774,307	1,087,325	1,588,482
Number of Customers Affected	505,772	501,539	409,124	340,440	422,843	435,944
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	8.23	1.97	2.27	2.27	2.57	3.46
Average Duration Per Customers Served	1.31	0.31	0.29	0.24	0.33	0.49
Interruptions Per 1000 Customers Served	3.31	3.52	3.59	4.56	4.23	3.84
Number of Customers Affected Per Customer Served (SAIFI)	0.16	0.16	0.13	0.10	0.13	0.13

CON ED (SYSTEM)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	15,862	12,508	12,398	15,340	19,336	15,089
Number of Customer-Hours	9,023,979	1,781,740	1,225,917	1,122,677	11,227,471	4,876,357
Number of Customers Affected	733,204	570,760	452,915	366,693	745,782	573,871
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	12.31	3.12	2.71	3.06	15.05	7.25
Average Duration Per Customers Served	2.83	0.55	0.38	0.34	3.41	1.50
Interruptions Per 1000 Customers Served	4.98	3.89	3.82	4.69	5.87	4.65
Number of Customers Affected Per Customer Served (SAIFI)	0.23	0.18	0.14	0.11	0.23	0.18

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	4,274	5,571	5,485	8,650	7,434	6,283
Number of Customer-Hours	2,947,306	316,477	252,964	273,705	370,405	832,171
Number of Customers Affected	48,467	176,430	40,301	52,994	54,555	74,549
Number of Customers Served	2,363,897	2,361,145	2,385,760	2,403,818	2,439,565	2,390,837
Average Duration Per Customer Affected (CAIDI)	60.81	1.79	6.28	5.16	6.79	16.17
Average Duration Per Customers Served	1.26	0.13	0.11	0.11	0.15	0.35
Interruptions Per 1000 Customers Served	1.83	2.36	2.32	3.63	3.09	2.64
Number of Customers Affected Per Customer Served (SAIFI)	0.021	0.075	0.017	0.022	0.023	0.031

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CON ED (RADIAL)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	6,267	5,750	6,160	6,285	6,477	6,188
Number of Customer-Hours	1,216,101	673,511	674,419	500,602	716,920	756,310
Number of Customers Affected	457,305	325,109	368,823	287,446	368,288	361,394
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	2.66	2.07	1.83	1.74	1.95	2.05
Average Duration Per Customers Served	1.43	0.79	0.76	0.57	0.81	0.87
Interruptions Per 1000 Customers Served	7.39	6.73	6.97	7.09	7.29	7.10
Number of Customers Affected Per Customer Served (SAIFI)	0.54	0.38	0.42	0.32	0.41	0.42

CON ED (RADIAL)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	11,588	6,937	6,913	6,690	11,902	8,806
Number of Customer-Hours	6,076,673	1,465,264	972,954	848,971	10,857,066	4,044,185
Number of Customers Affected	684,737	394,330	412,614	313,699	691,227	499,321
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	8.87	3.72	2.36	2.71	15.71	6.67
Average Duration Per Customers Served	7.17	1.71	1.10	0.96	12.23	4.63
Interruptions Per 1000 Customers Served	13.67	8.12	7.82	7.55	13.40	10.11
Number of Customers Affected Per Customer Served (SAIFI)	0.81	0.46	0.47	0.35	0.78	0.57

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LIPA
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	18,634	18,736	18,135	17,795	17,180	18,096
Number of Customer-Hours	1,129,275	1,190,411	1,166,613	958,679	905,031	1,070,002
Number of Customers Affected	823,396	995,077	856,405	821,723	811,969	861,714
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.37	1.20	1.36	1.17	1.11	1.24
Average Duration Per Customers Served	1.03	1.08	1.05	0.86	0.81	0.97
Interruptions Per 1000 Customers Served	16.99	16.98	16.36	16.02	15.41	16.35
Number of Customers Affected Per Customer Served (SAIFI)	0.75	0.90	0.77	0.74	0.73	0.78

LIPA
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	24,905	20,077	20,471	19,003	22,867	21,465
Number of Customer-Hours	2,564,134	1,564,559	1,998,270	1,121,723	2,125,507	1,874,839
Number of Customers Affected	1,289,698	1,142,365	1,208,292	894,595	1,153,884	1,137,767
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.99	1.37	1.65	1.25	1.84	1.62
Average Duration Per Customers Served	2.34	1.42	1.80	1.01	1.91	1.70
Interruptions Per 1000 Customers Served	22.71	18.20	18.47	17.11	20.51	19.40
Number of Customers Affected Per Customer Served (SAIFI)	1.18	1.04	1.09	0.81	1.04	1.03

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
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NATIONAL GRID
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	13,665	14,606	12,939	15,915	13,822	14,189
Number of Customer-Hours	3,289,340	3,045,363	2,334,754	2,645,775	2,529,126	2,768,872
Number of Customers Affected	1,607,461	1,518,634	1,188,585	1,387,131	1,277,727	1,395,908
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98
Average Duration Per Customers Served	2.07	1.92	1.46	1.67	1.59	1.74
Interruptions Per 1000 Customers Served	8.62	9.19	8.12	10.05	8.69	8.93
Number of Customers Affected Per Customer Served (SAIFI)	1.01	0.96	0.75	0.88	0.80	0.88

NATIONAL GRID
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	16,279	16,222	18,301	17,060	15,571	16,687
Number of Customer-Hours	16,813,162	5,605,931	9,410,833	3,214,148	3,824,438	7,773,703
Number of Customers Affected	2,341,235	2,075,480	2,177,786	1,599,090	1,553,727	1,949,464
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	7.18	2.70	4.32	2.01	2.46	3.74
Average Duration Per Customers Served	10.61	3.53	5.90	2.03	2.41	4.89
Interruptions Per 1000 Customers Served	10.27	10.20	11.48	10.77	9.79	10.50
Number of Customers Affected Per Customer Served (SAIFI)	1.48	1.31	1.37	1.01	0.98	1.23

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** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NYSEG
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	9,682	10,317	10,027	9,643	9,777	9,889
Number of Customer-Hours	1,913,315	2,299,142	1,980,213	1,848,599	1,934,747	1,995,203
Number of Customers Affected	953,941	1,034,113	953,105	922,448	975,375	967,796
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06
Average Duration Per Customers Served	2.24	2.68	2.30	2.16	2.25	2.32
Interruptions Per 1000 Customers Served	11.33	12.00	11.66	11.25	11.39	11.52
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13

NYSEG
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	12,835	12,928	17,008	11,948	14,976	13,939
Number of Customer-Hours	15,787,602	5,314,914	12,974,501	3,369,824	6,445,599	8,778,488
Number of Customers Affected	1,529,247	1,469,825	1,836,251	1,257,464	1,576,105	1,533,778
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	10.32	3.62	7.07	2.68	4.09	5.55
Average Duration Per Customers Served	18.48	6.18	15.09	3.93	7.51	10.24
Interruptions Per 1000 Customers Served	15.02	15.04	19.78	13.93	17.44	16.24
Number of Customers Affected Per Customer Served (SAIFI)	1.79	1.71	2.14	1.47	1.84	1.79

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O&R
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	2,688	2,596	2,993	2,987	2,897	2,832
Number of Customer-Hours	397,977	356,514	470,431	375,064	472,939	414,585
Number of Customers Affected	264,121	222,895	256,943	223,976	263,752	246,337
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	1.51	1.60	1.83	1.67	1.79	1.68
Average Duration Per Customers Served	1.85	1.65	2.18	1.73	2.17	1.92
Interruptions Per 1000 Customers Served	12.53	12.00	13.88	13.74	13.30	13.09
Number of Customers Affected Per Customer Served (SAIFI)	1.23	1.03	1.19	1.03	1.21	1.14

O&R
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,546	2,738	3,655	3,111	3,646	3,339
Number of Customer-Hours	836,046	483,938	1,043,235	471,941	1,857,491	938,530
Number of Customers Affected	388,164	252,650	354,315	249,064	389,937	326,826
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	2.15	1.92	2.94	1.89	4.76	2.73
Average Duration Per Customers Served	3.90	2.24	4.84	2.17	8.53	4.33
Interruptions Per 1000 Customers Served	16.53	12.66	16.95	14.31	16.73	15.44
Number of Customers Affected Per Customer Served (SAIFI)	1.81	1.17	1.64	1.15	1.79	1.51

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RG&E
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,004	2,784	2,807	2,950	2,872	2,883
Number of Customer-Hours	508,899	526,175	513,175	378,481	432,921	471,930
Number of Customers Affected	286,388	303,940	277,824	210,698	253,517	266,473
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77
Average Duration Per Customers Served	1.40	1.44	1.44	1.06	1.21	1.31
Interruptions Per 1000 Customers Served	8.24	7.63	7.86	8.28	8.04	8.01
Number of Customers Affected Per Customer Served (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74

RG&E
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,241	3,107	3,828	3,110	3,081	3,273
Number of Customer-Hours	762,609	761,368	1,830,153	534,259	615,789	900,835
Number of Customers Affected	356,788	423,383	485,821	263,203	282,347	362,308
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	2.14	1.80	3.77	2.03	2.18	2.38
Average Duration Per Customers Served	2.09	2.09	5.12	1.50	1.72	2.51
Interruptions Per 1000 Customers Served	8.89	8.52	10.72	8.73	8.63	9.10
Number of Customers Affected Per Customer Served (SAIFI)	0.98	1.16	1.36	0.74	0.79	1.01

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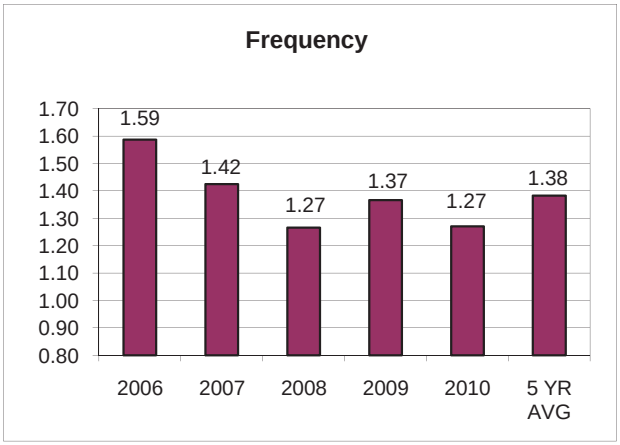
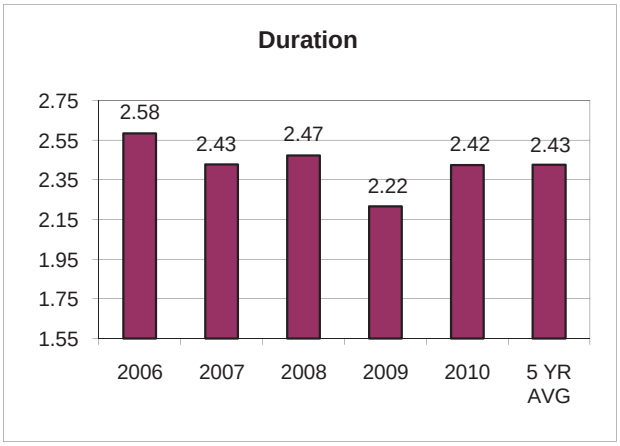
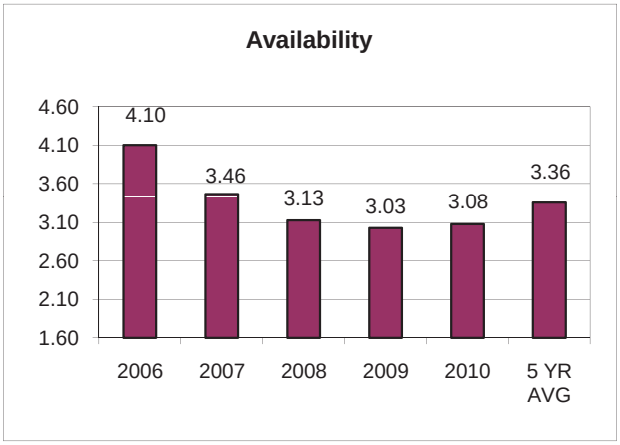
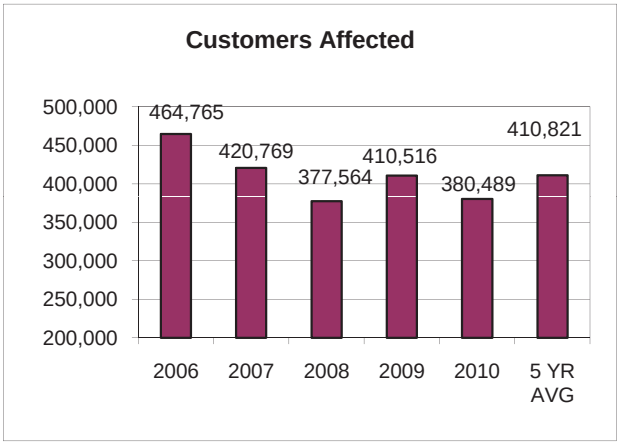
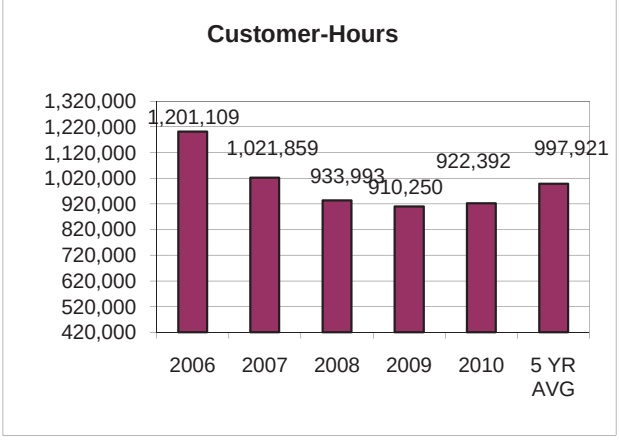
Central Hudson Gas and Electric
(Excluding Major Storms)

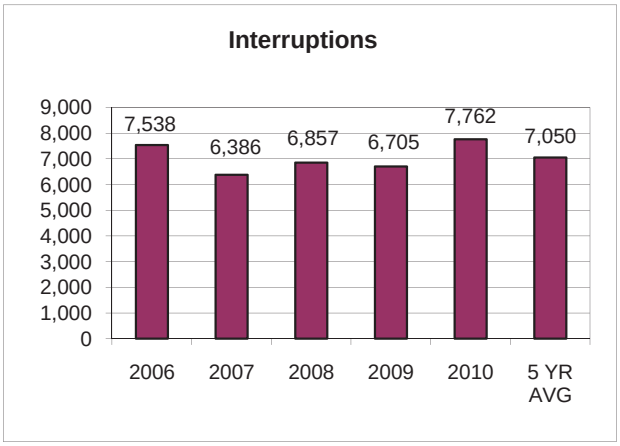




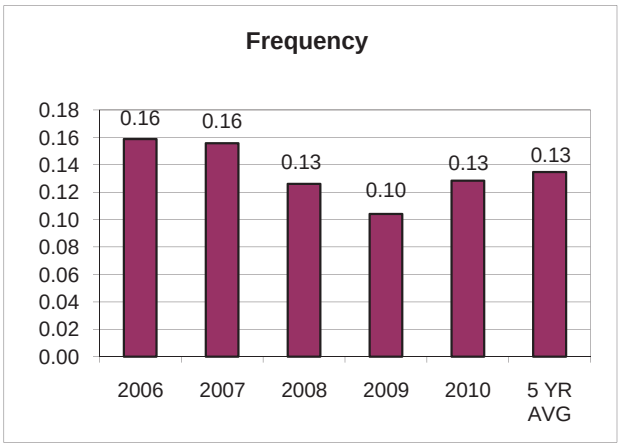


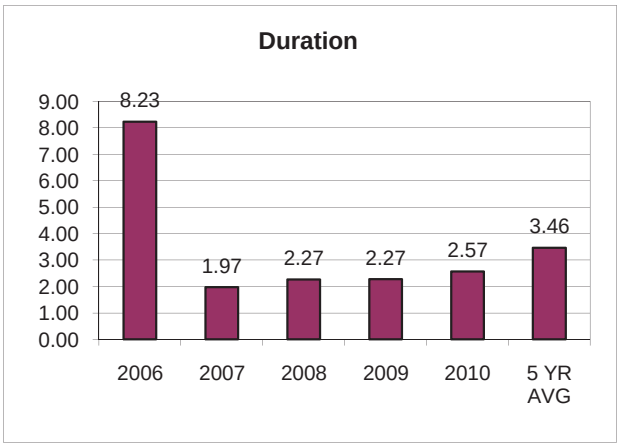


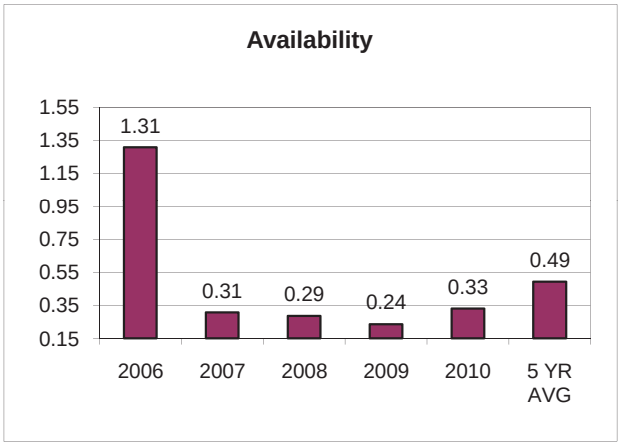


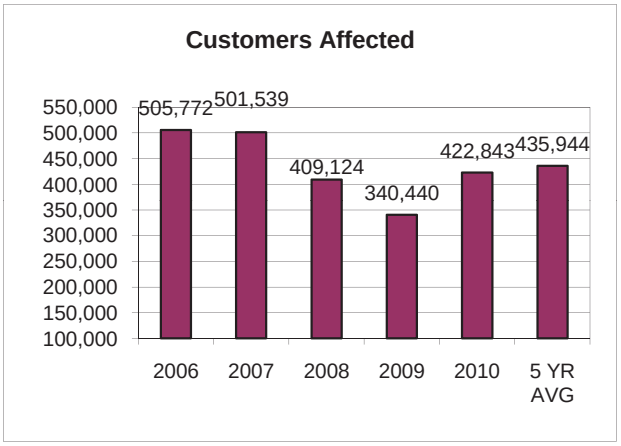


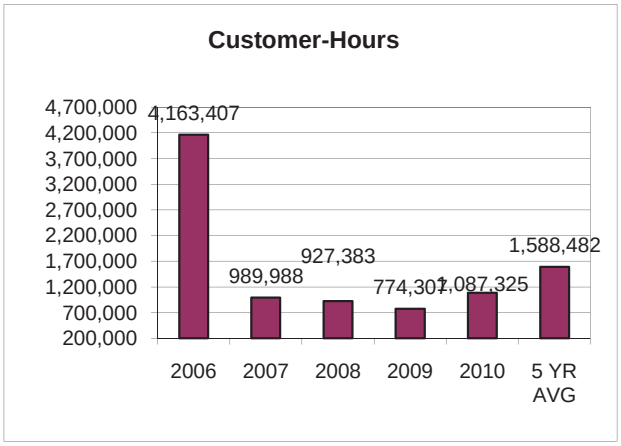
Consolidated Edison - System
(Excluding Major Storms)

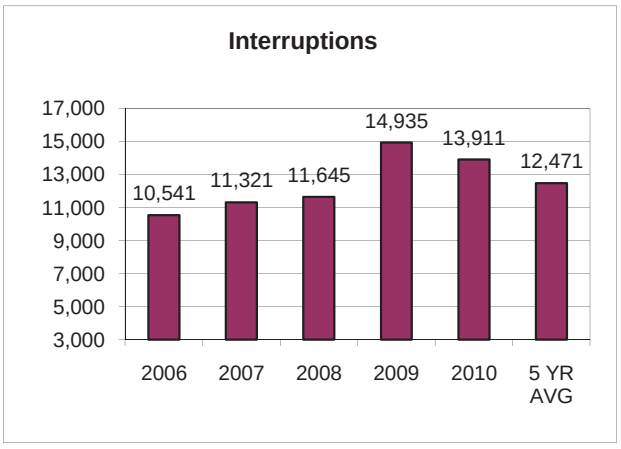




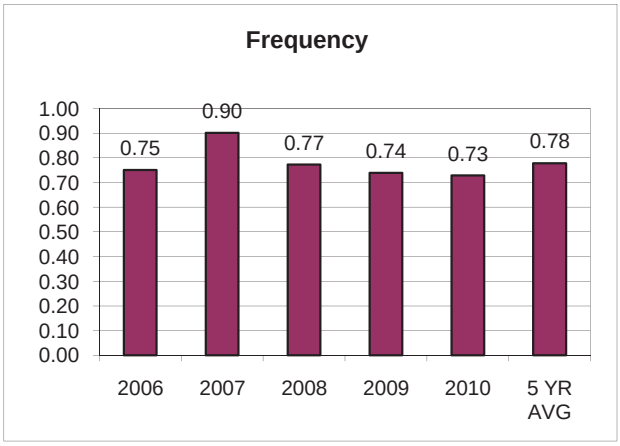


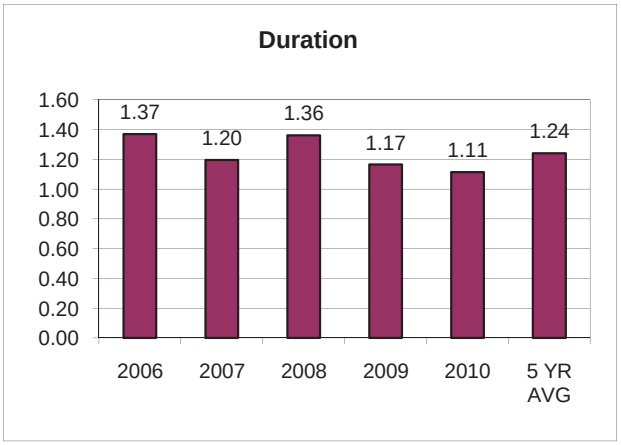


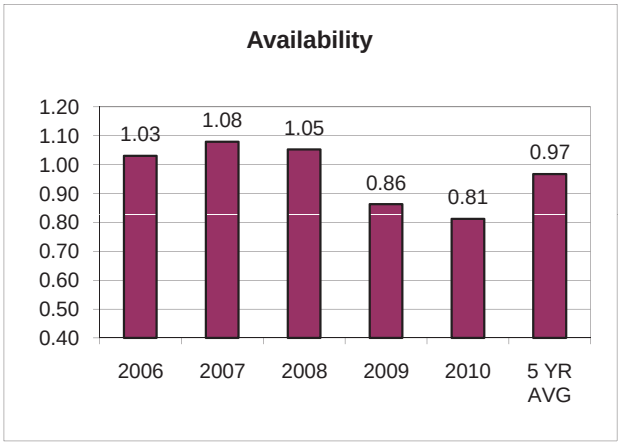


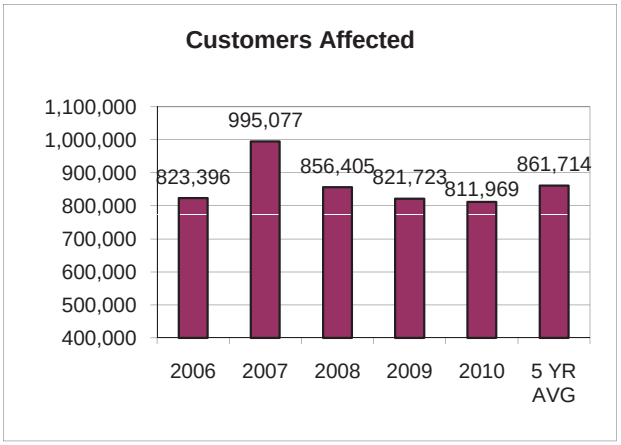


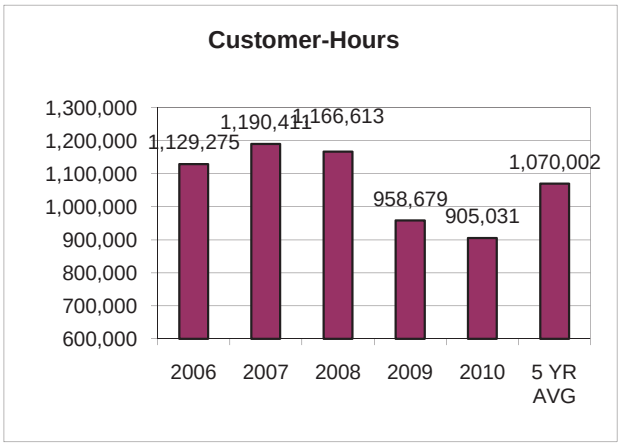
Long Island Power Authority
(Excluding Major Storms)

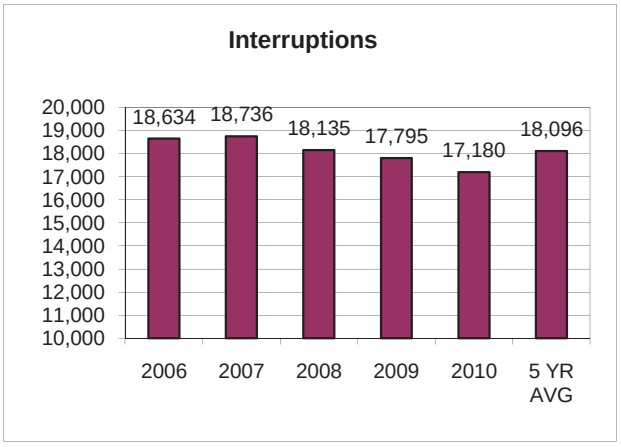






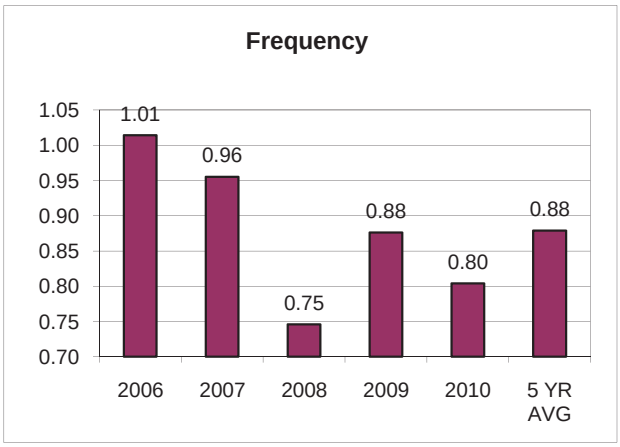


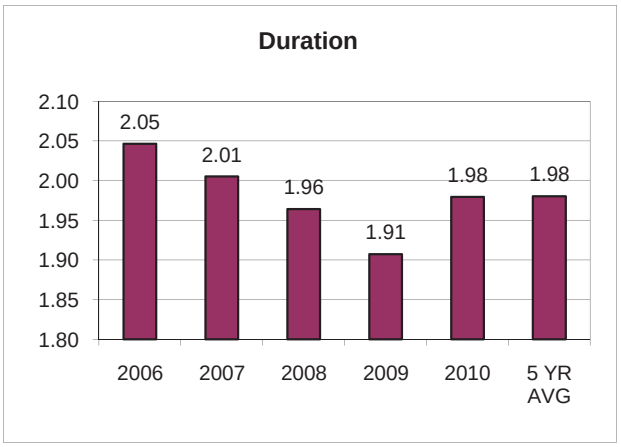


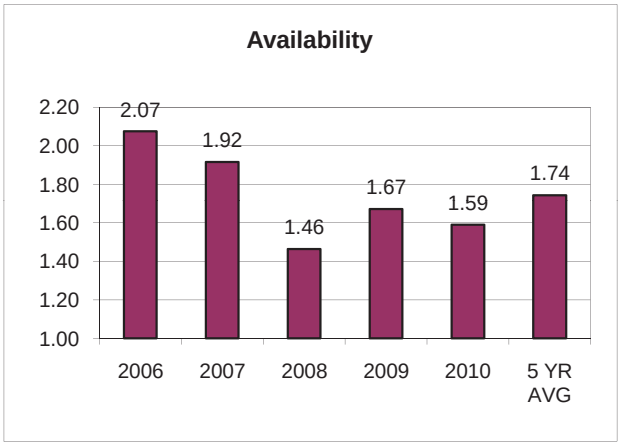


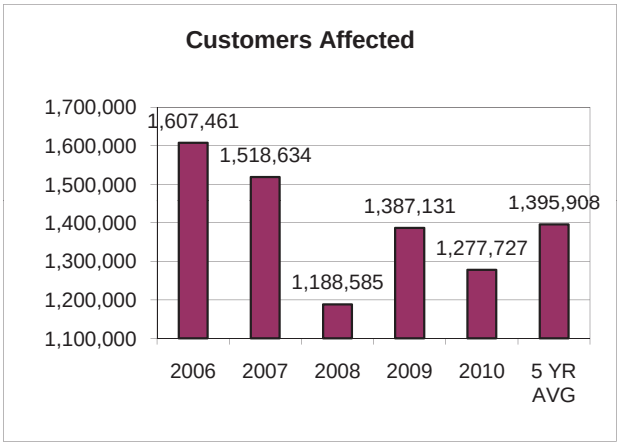
* LIPA is not regulated by the NYS PSC.

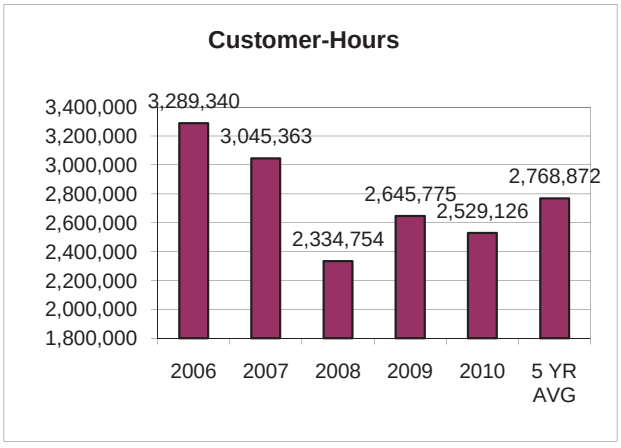
National Grid
(Excluding Major Storms)

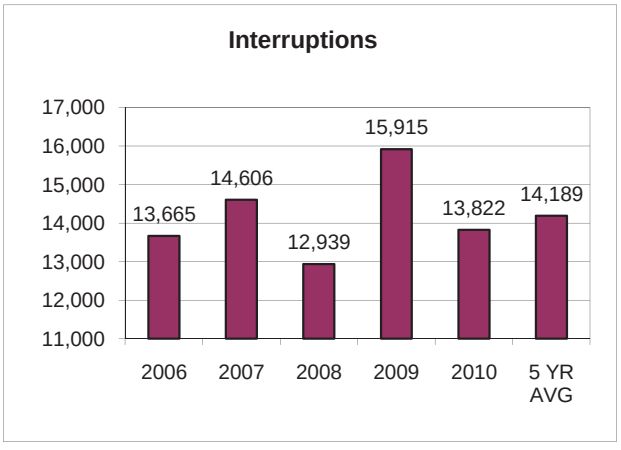












New York State Electric and Gas
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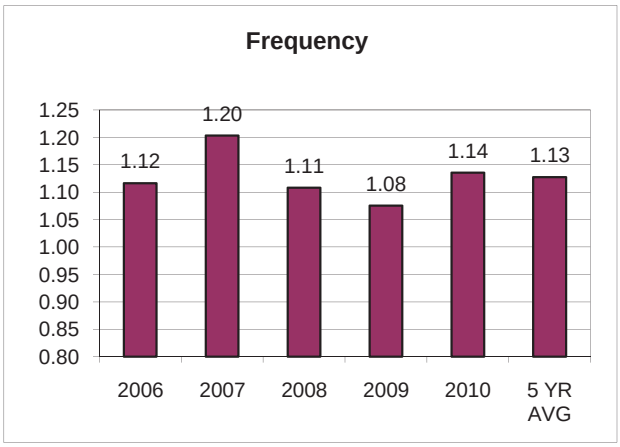
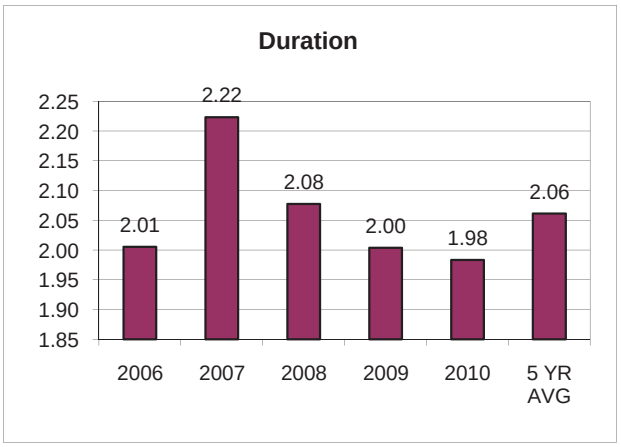
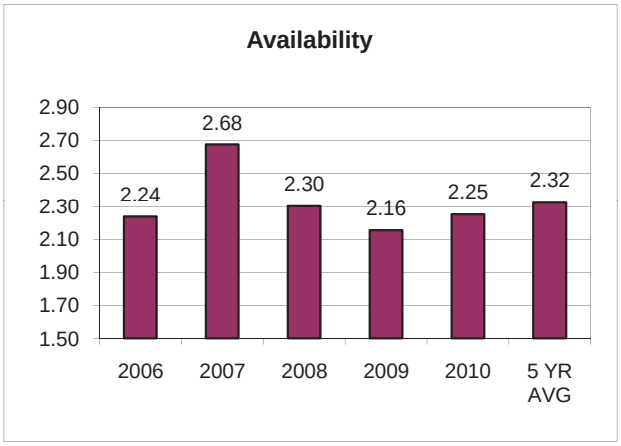
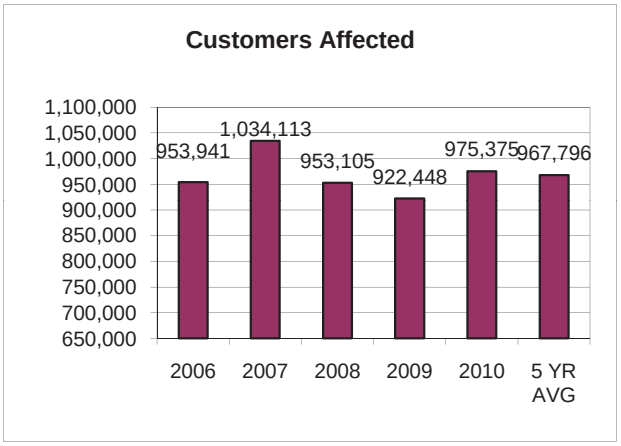
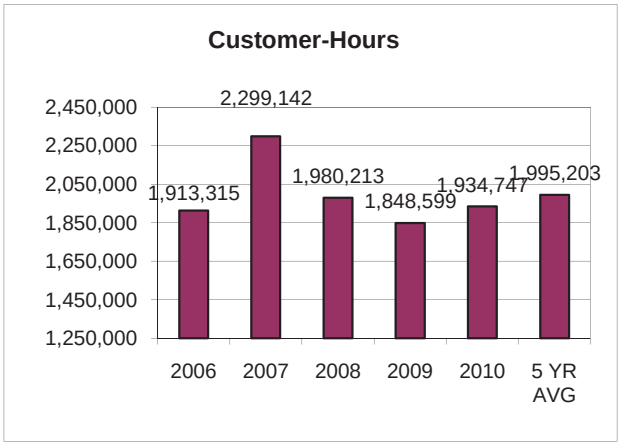
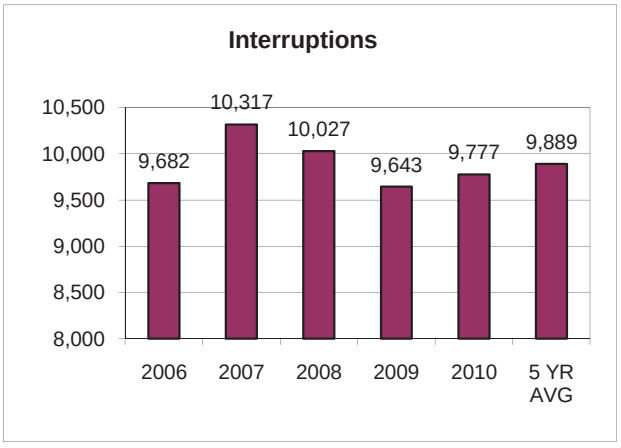




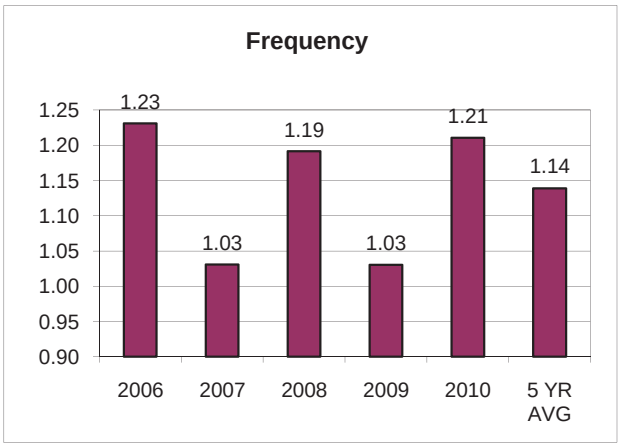


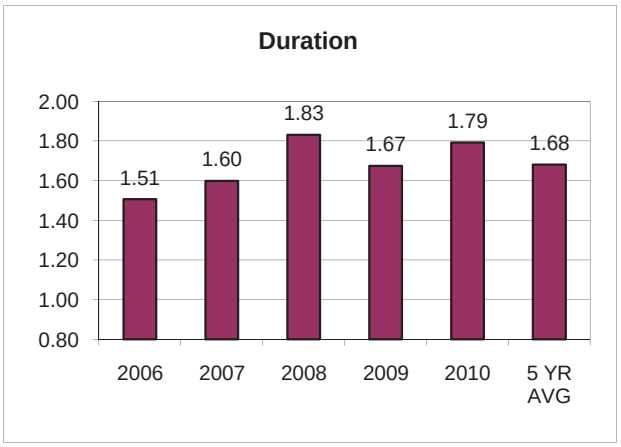


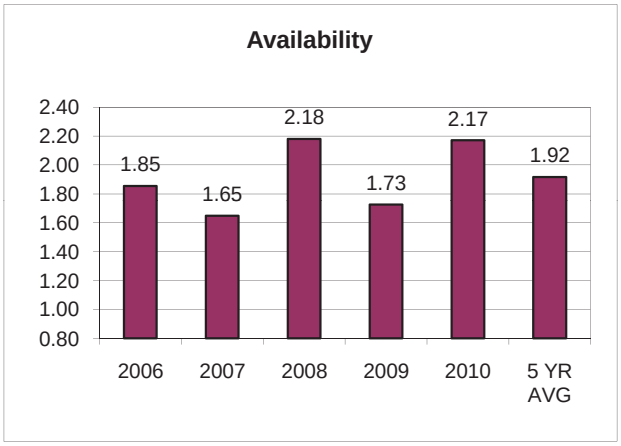


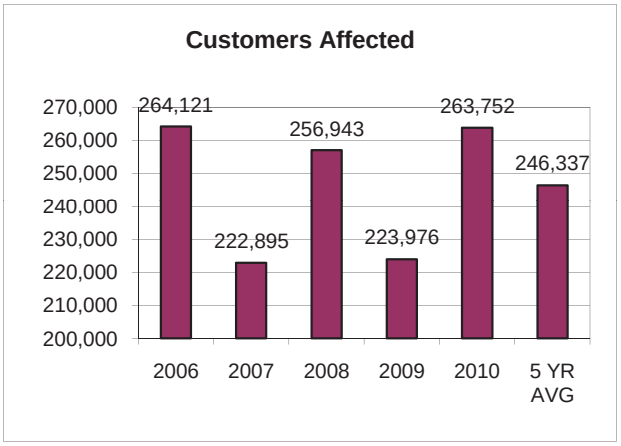


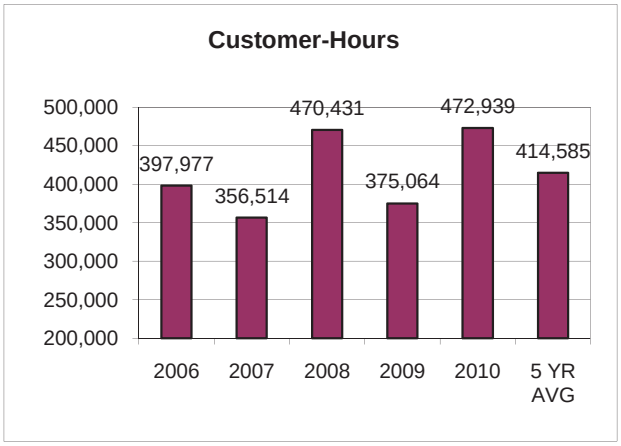
Orange and Rockland Utilities
(Excluding Major Storms)

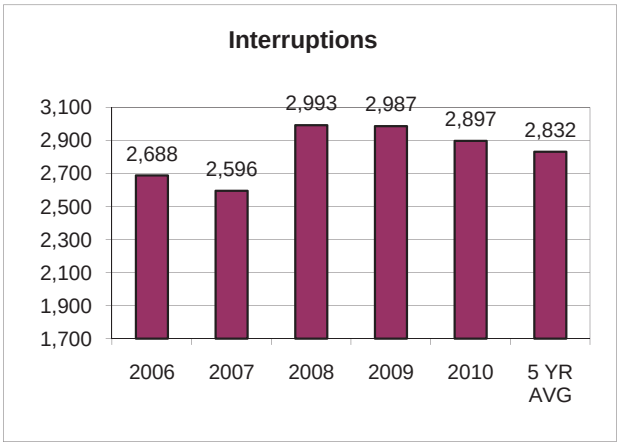




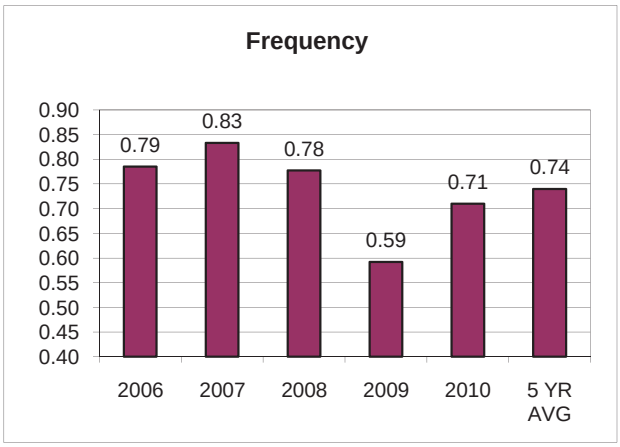


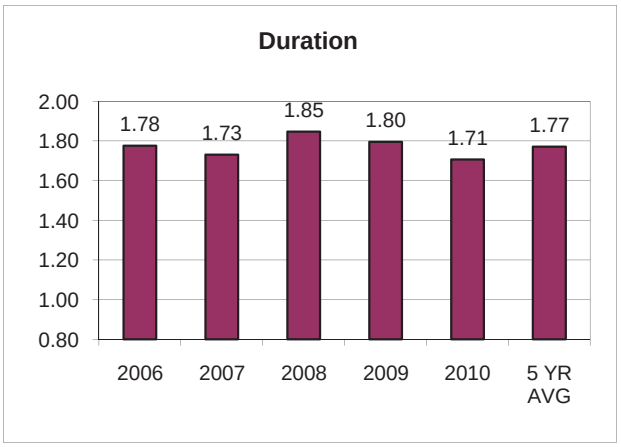


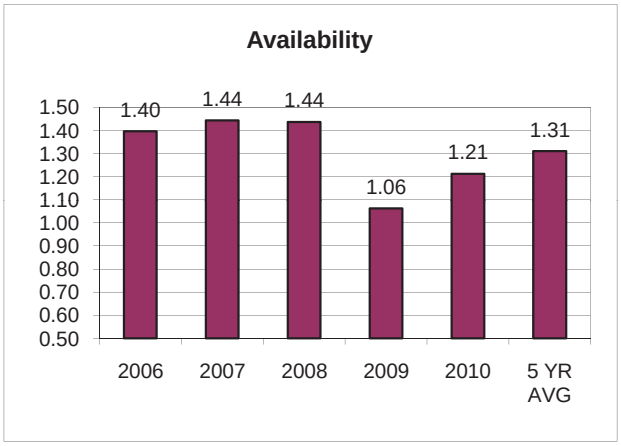


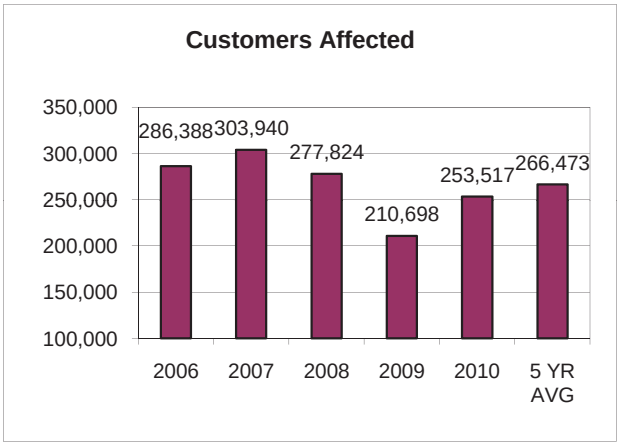


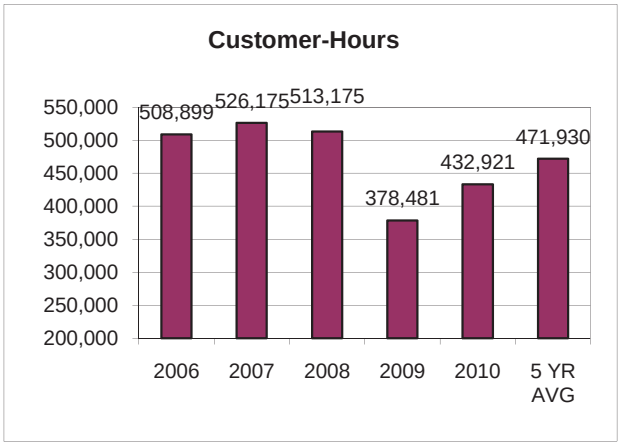
Rochester Gas and Electric
(Excluding Major Storms)

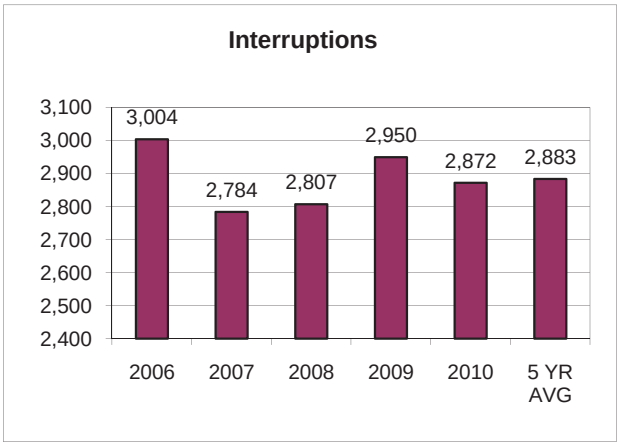












Reliability Report Data 2002-2012
Investor-Owned Utilities

This report summarizes the reliability indices reports filed by each of the investor-owned utilities, in compliance with 170 IAC 4-1-23(e). Reliability data is shown for the time period 2002 through 2012.

Each utility reported its indices with and without major events. Major events are storms or weather events that are more destructive than normal storm patterns. The utilities do not all define a "major event" exactly the same; therefore some utilities will capture more of their service interruptions in the "without" category than other utilities. This is one reason why one should avoid making direct comparisons among the utilities based on the indices. Service territory geography and size and customer mix are also factors that make direct comparison of the indices among the utilities difficult.

Three separate reliability indices were reported by each of the utilities:

- System Average Interruption Frequency Index (SAIFI): the total number of customer interruptions divided by the total number of customers (average interruptions per customer).
- System Average Interruption Duration Index (SAIDI): the sum of all customer interruption durations (in minutes) divided by the total number of customers (average minutes of interruption per customer).
- Customer Average Interruption Duration Index (CAIDI): SAIDI divided by SAIFI (average minutes per interruption).

"Major Events" (Weather) Summary

The following table summarizes the number of major event days each utility reported having in 2012. In addition to the major events below, NIPSCO stated it experienced an additional 76 weather events it considered severe. It should be noted that one storm system can potentially cause multiple major event days.

Utility	Major Event Days
NIPSCO	17
IPL	6
I&M	9
Duke Energy Indiana	4
Vectren	4

Electric Reliability: Including Major Events*											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
NIPSCO											
SAIFI	1.41	1.65	1.38	1.24	1.40	2.23	1.80	0.88	1.36	1.38	1.44
SAIDI	542	498	317	258	317	1,073	882	140	505	371	428
CAIDI	385	302	229	208	227	480	490	158	372	269	297
PSI/Duke											
SAIFI	1.57	1.58	1.66	1.59	1.63	1.41	2.48	1.76	1.58	2.07	1.52
SAIDI	170	201	255	282	203	178	689	293	195	630	216
CAIDI	109	128	153	177	125	126	278	166	124	304	143
IPL											
SAIFI	1.17	0.90	0.81	0.90	1.07	0.76	1.54	1.1	1.04	0.86	1.04
SAIDI	133	98	77	67	105	47	359	158	71	75	125
CAIDI	113	108	94	74	98	62	233	145	68	88	120
Vectren											
SAIFI	1.46	1.27	2.36	2.05	1.87	1.23	2.33	2.56	1.02	2.16	1.24
SAIDI	164	111	932	376	241	89	859	2,889	90	711	117
CAIDI	107	87	395	185	128	72	369	1,126	88	330	95
I&M											
SAIFI	1.68	1.56	1.42	1.31	1.24	1.24	1.63	0.91	0.98	1.12	1.39
SAIDI	931	594	291	1,132	222	199	1,164	122	392	258	1,071
CAIDI	554	380	205	863	179	161	713	133	400	230	773

Notes

SAIFI: System Average Interruption Frequency Index; (total # of customer interruptions) / (total # of customers)

SAIDI: System Average Interruption Duration Index; (duration or time of service interruptions) / (total # of customers)

CAIDI: Customer Average Interruption Duration Index; (SAIDI) / (SAIFI)

*Major events are storms or weather events that are more destructive than normal storm patterns. The same definition of "major event" is not used by all utilities.

**NIPSCO's 2007 report updated values for 2004-2006 based on accepted industry standard IEEE Std 1366 - the values above reflect these revisions.

Electric Reliability: NOT Including Major Events*											
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
NIPSCO											
SAIFI	1.15	1.45	1.22	1.09	1.21	1.06	1.11	0.88	0.94	0.92	0.83
SAIDI	196	350	213	181	196	180	199	140	122	126	102
CAIDI	171	242	175	166	163	169	179	158	130	137	123
PSI/Duke											
SAIFI	1.36	1.22	1.21	1.27	1.32	1.23	1.26	1.3	1.32	1.27	1.29
SAIDI	134	127	124	138	136	133	146	133	138	146	149
CAIDI	98	103	102	109	103	109	116	102	104	115	115
IPL											
SAIFI	1.03	0.79	0.71	0.90	1.07	0.76	1.04	0.94	1.04	0.86	0.82
SAIDI	74	66	53	67	105	47	81	81	71	75	57
CAIDI	72	83	75	74	98	62	78	86	68	88	70
Vectren											
SAIFI	1.46	1.27	1.12	1.68	1.51	1.23	1.42	1.2	1.02	1.43	1.07
SAIDI	164	111	107	137	151	89	133	110	90	137	83
CAIDI	107	87	95	82	100	72	94	92	88	96	78
I&M											
SAIFI	1.12	0.95	1.25	1.00	1.12	1.11	1.12	0.83	0.74	0.99	0.91
SAIDI	179	129	194	171	147	139	144	90	111	154	137
CAIDI	159	135	156	171	131	126	129	109	151	156	151

Notes

SAIFI: System Average Interruption Frequency Index; (total # of customer interruptions) / (total # of customers)

SAIDI: System Average Interruption Duration Index; (duration or time of service interruptions) / (total # of customers)

CAIDI: Customer Average Interruption Duration Index; (SAIDI) / (SAIFI)

*Major events are storms or weather events that are more destructive than normal storm patterns. The same definition of "major event" is not used by all utilities.

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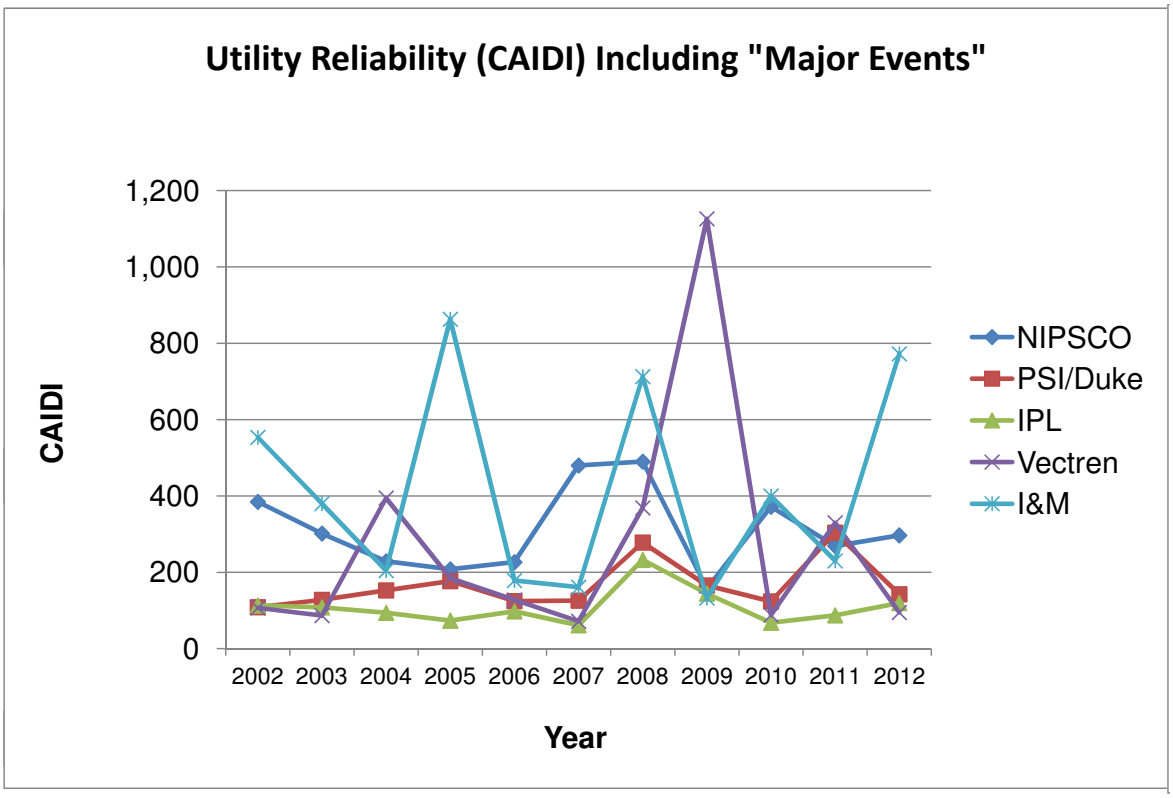
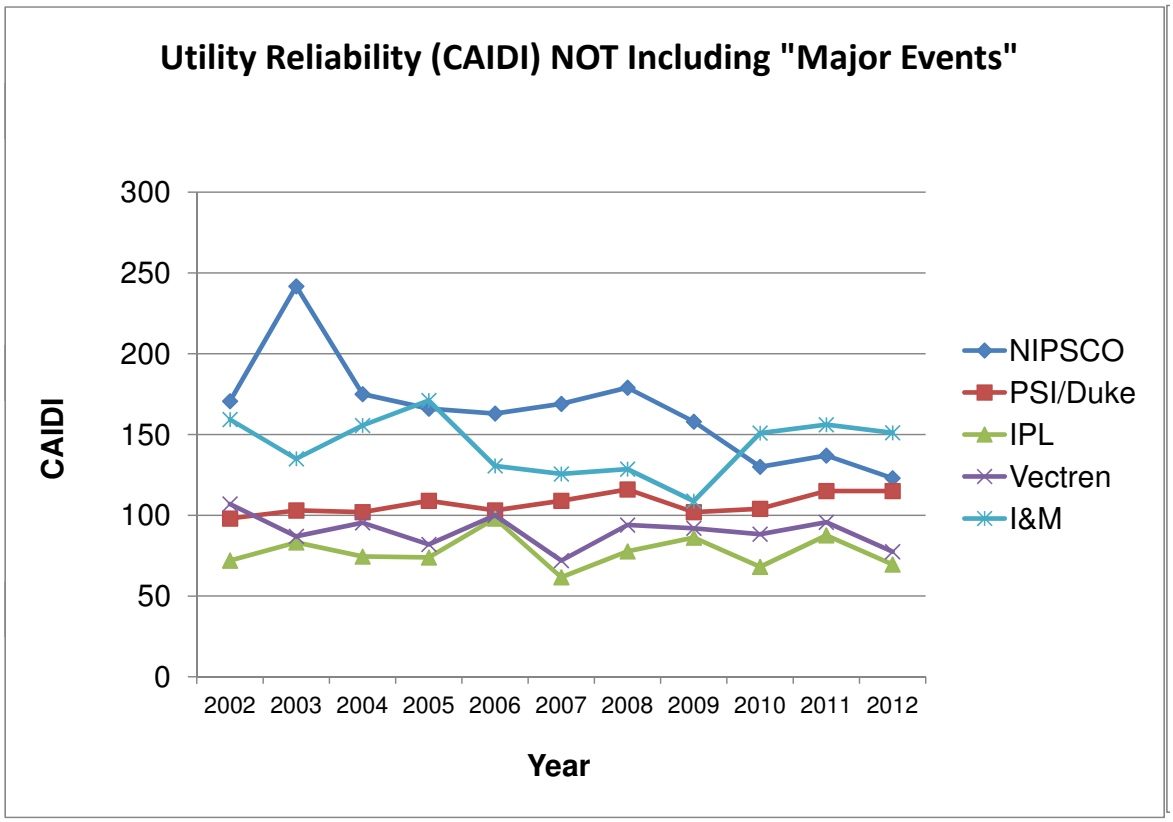
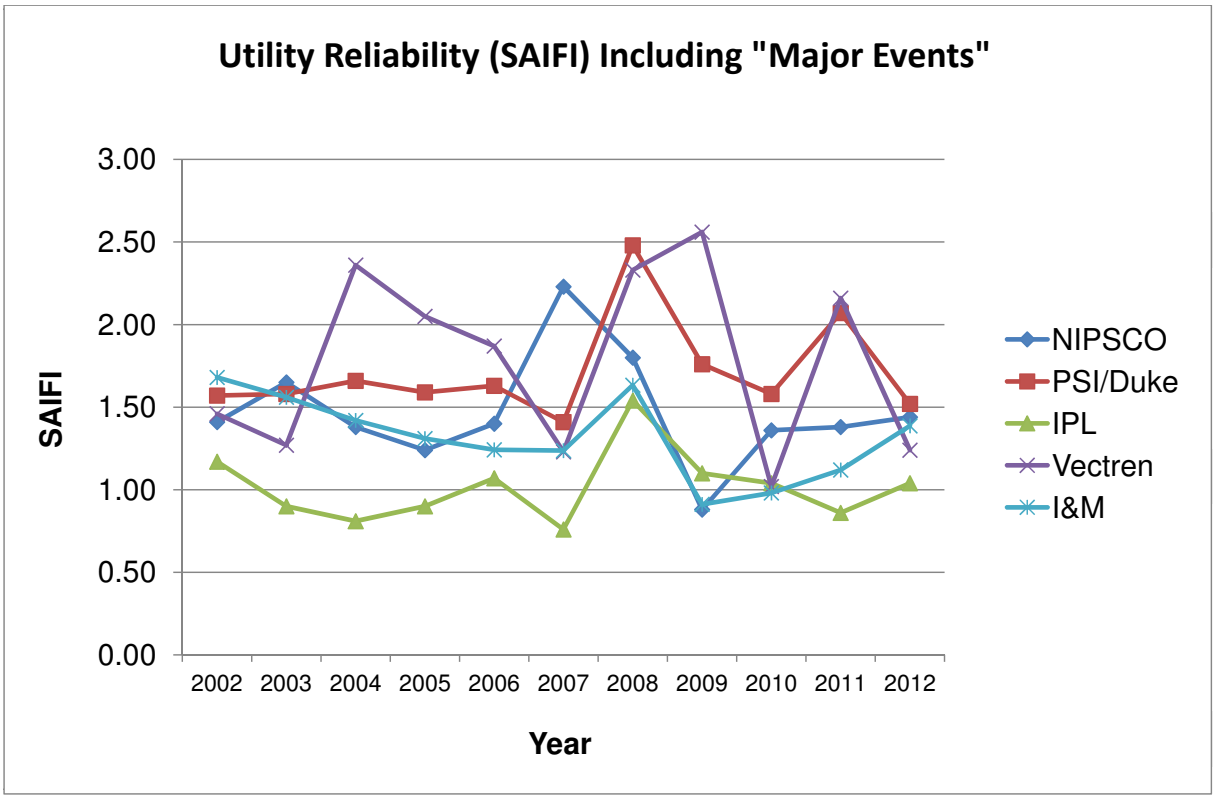
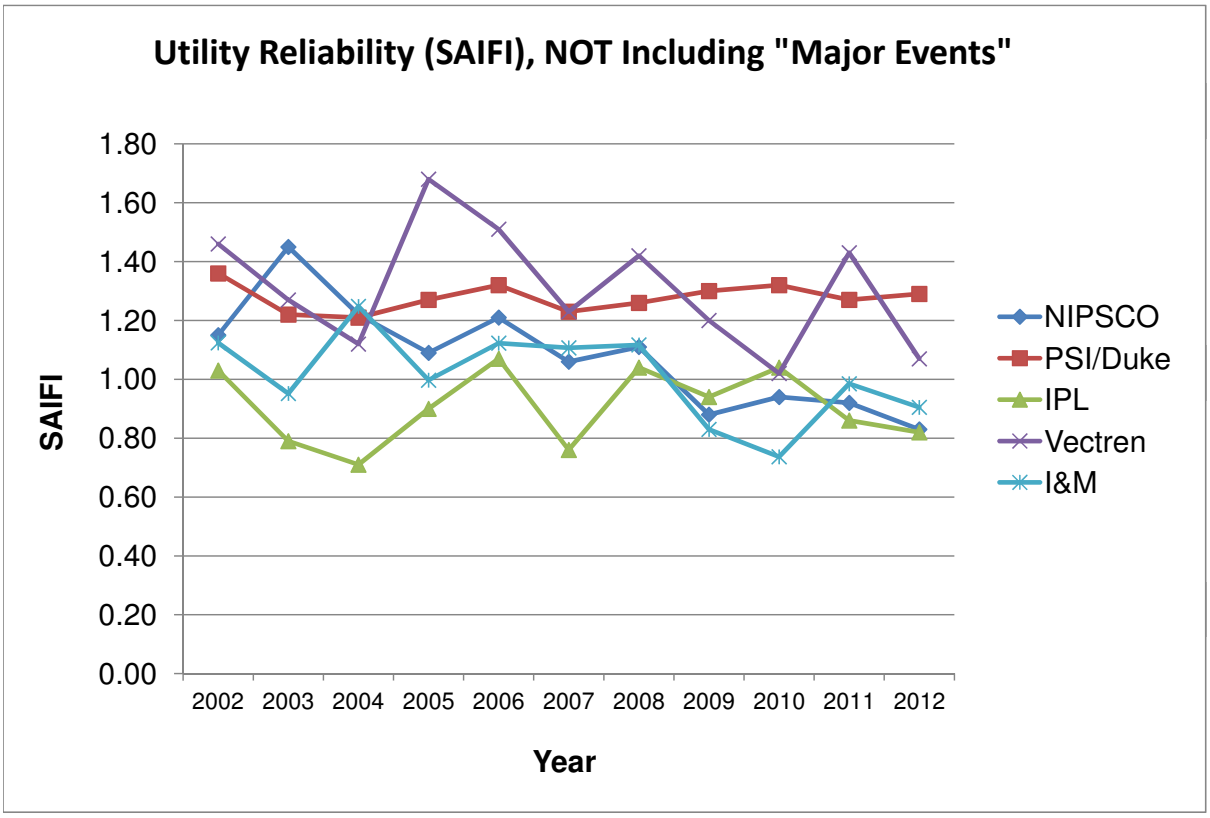
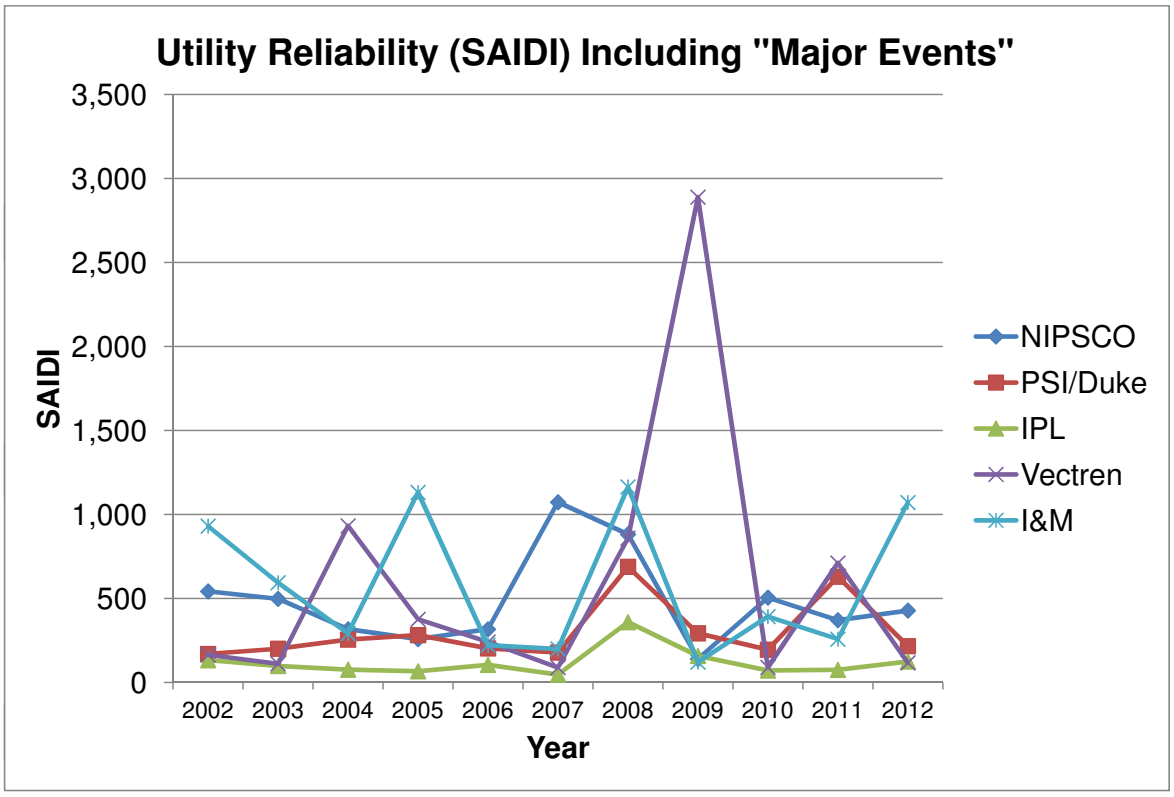
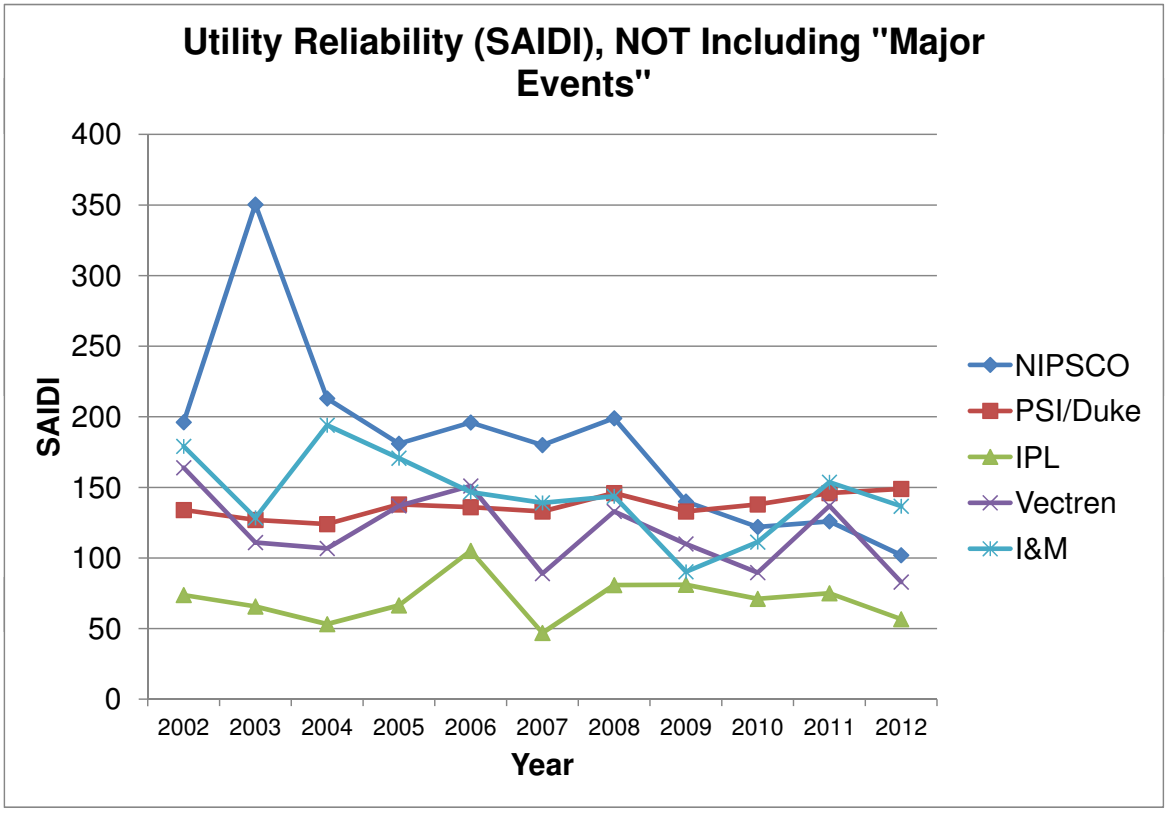

Utility Reliability (CAIDI) Including "Major Events"
CAIDI
1,200
1,000
800
600
400
200
0
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M


Utility Reliability (CAIDI) NOT Including "Major Events"
CAIDI
300
250
200
150
100
50
0
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M


Utility Reliability (SAIFI) Including "Major Events"
SAIFI
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M


Utility Reliability (SAIFI), NOT Including "Major Events"
SAIFI
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M


Utility Reliability (SAIDI) Including "Major Events"
SAIDI
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M

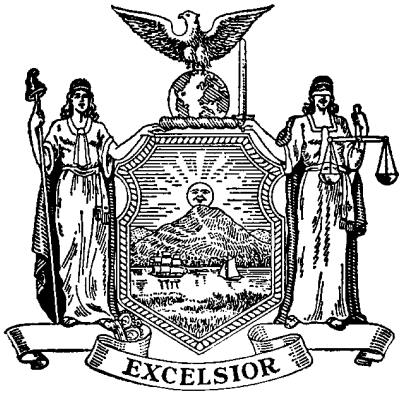

Utility Reliability (SAIDI), NOT Including "Major Events"
SAIDI
400
350
300
250
200
150
100
50
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year
NIPSCO
PSI/Duke
IPL
Vectren
I&M

Comparison of 2012 Indices with 2002-2011 Average Indices (Without Major Events)				
	2012	***2002-2011 Avg.***	**2012 Diff Vs Avg**	**2012 % Diff Vs Avg**
NIPSCO*				
SAIFI	0.83	1.10	-0.27	-25%
SAIDI	102	190	-88	-46%
CAIDI	123	169	-46	-27%
PSI/Duke				
SAIFI	1.29	1.28	0.01	1%
SAIDI	149	136	14	10%
CAIDI	115	106	9	8%
IPL				
SAIFI	0.82	0.91	-0.09	-10%
SAIDI	57	72	-15	-21%
CAIDI	70	78	-9	-11%
Vectren				
SAIFI	1.07	1.33	-0.26	-20%
SAIDI	83	123	-40	-32%
CAIDI	78	91	-14	-15%
I&M				
SAIFI	0.91	1.02	-0.12	-11%
SAIDI	137	146	-9	-6%
CAIDI	151	142	9	6%

*NIPSCO's 2007 report updated values for 2004-2006 based on accepted industry standard IEEE Std 1366.
The averages above reflect these revisions.

STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2008 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State. As a means of monitoring the levels of service, utilities are required to submit detailed interruption data to the Public Service Commission (Commission). Staff relies on two primary metrics to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] By compiling the results of individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State.

The statewide interruption frequency for 2008, excluding major storms, was considerably better than that recorded in 2007, where all companies except Orange and Rockland Utilities, Inc. (Orange and Rockland) showed improvement. The statewide duration in 2008 was slightly worse than in 2007. The year 2008 was the second-most affected by storms in five years and had 35 more storms than in 2007. Staff attributes some of the 2008 improvement in frequency to the high number of major storms (excludable events). Typical weather patterns result in less severe weather that lead to minor storms, which are included in the measures and thereby increase performance measures. Similar overall patterns exist for frequency and duration when analyzing the reliability data excluding Consolidated Edison Company of New York, Inc (Con Edison) performances.[2]

With respect to individual utilities' performances in 2008, Central Hudson Gas and Electric Corporation (Central Hudson), Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) and Rochester Gas and Electric Corporation (RG&E) performed at, or better than, their historic levels. Infrastructure improvements

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] Con Edison's system includes many large, highly concentrated distribution networks. As a result, its interruption frequency is extremely low as compared to other utilities' interruption frequency and typically skews aggregated data measurements. Therefore, Staff examines statewide statistics both including and excluding Con Edison's data.

associated with National Grid's commitment to invest $1.47 billion over a five year period appears to positively affect its reliability performance.[3] Additionally, Central Hudson's revised tree trimming program seems to be helping in reducing tree caused interruptions. In 2008, Orange and Rockland was not as good as its 2007 performance for both frequency (slight change) and duration. Orange and Rockland attributes its change in duration to the installation of distribution automation; Staff is currently investigating the relationship between distribution automation and duration.

Con Edison performed satisfactorily on its radial system for both frequency and duration, and better than previous year with respect to its network frequency. The Company's performance in 2008 for network duration, however, was significantly worse than its historic performance. Based on a self-assessment conducted in response to Staff's report for 2007Con Edison identified strategies to improve its performance and is implementing several pilot programs this summer. It also formed a task force to continue to identify means to improve performances, especially on it network system. The programs involve predictive outage modeling, improvements to assist in crew allocation and deployment in order to improve both network and radial outage durations. In order to evaluate the effectiveness of Con Edison's actions, Staff is recommending that the Company file a report of the task force findings and results from its pilot programs by September 15, 2009. Staff is also recommending Con Edison perform a self-assessment to identify actions to improve its network duration performance and file the self-assessment with Staff by September 15, 2009.

Although NYSEG's overall reliability statistics improved compared with 2007, its performance with respect to tree related outages continues to decline. In last year's reliability report, Staff recommended NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. The continued decline in performance with respect to tree related interruptions is not surprising because the Company's self-

[3] Case 06-M-0878, Joint Petition of National Grid PLC and KeySpan Corporation for Approval of Stock Acquisition and other Regulatory Authorizations.

assessment showed approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. NYSEG's decision to reduce its tree trimming activities and expenditures despite declining performance in this area needs to be examined in detail and will be the focus of a newly established Case 09-E-0472.[4]

Electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The reliability performance mechanisms are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets.[5] In 2008, Con Edison failed to achieve the duration target in its reliability performance mechanism for the network component of its distribution system and Orange and Rockland failed to achieve the duration target in its reliability performance mechanism for 2008. Combined, these failures resulted in about $5.4 million in negative revenue adjustments.

This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water. Con Edison is expected to comply with the recommendations and submit documentation by the dates indicated in the report.

[4] Case 09-E-0472, In the Matter of Investigation of New York State Electric and Gas Corporation Expenditures Related to its Line Clearance Programs.

[5] NYSEG was the only utility not under an RPM in 2007 and 2008 because its mechanism expired in 2006. A new RPM is in place for the Company's 2009 performance.

INTRODUCTION

The following report is an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service quality, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission about electric service interruptions on a monthly basis.[6] Using the data, Staff calculates two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information provided is also subdivided into 10 categories that reflect the nature of the cause of interruption (cause code).[7] By doing so, analysis of the cause code data can be used to highlight areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, devices could be installed on that circuit to try to minimize the problem. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which allows it to observe trends.

In addition, the Commission adopted standards addressing the reliability of electric service by establishing minimum acceptable levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31st of every year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause codes cover events not typically in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

feeders. There are no revenue adjustments for failure to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report.[9] The service standards were last revised in 2004.

Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more.[10] Major storm interruptions are excluded from the data when calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Performance inclusive of major storms shows the actual customer experience during a year.

[9] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

[10] Major storms do not include heat-related service interruptions.

2008 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities. Each year, Staff also prepares an Interruption Report summarizing the monthly interruption data submitted by the utilities. The 2008 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2008 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2008 and indicates company-specific trends where applicable.

In addition, performances are compared to utilities' reliability performance mechanisms (RPMs) placed into effect as part of their rate orders. The reliability performance mechanisms are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The targets are based on the indices used by the Commission's electric service standards.

Con Edison and Orange and Rockland each failed to achieve a target in their reliability performance mechanisms for 2008. Con Edison failed to achieve the duration target for its network system, resulting in a potential negative rate adjustment of $5 million.[11] Orange and Rockland failed to achieve its duration target, which results in a negative revenue adjustment of approximately $400,000.

STATEWIDE

For many years, Staff has been combining the individual utility performances into overall statewide statistics. By doing so, we evaluate the level of reliability provided and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks, its interruption frequency is

[11] This rate adjustment is a preliminary assessment based on Con Edison's March 31, 2009 filing that detailed the Company's compliance with its RPM. Con Edison's rate adjustment has not been presented to the Commission for final action.

extremely low as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, we examine and present aggregated data including and excluding Con Edison's data.

Statewide, the frequency of interruptions when excluding major storms was 0.56 in 2008, which is considerably better than the five-year average of 0.63 and better than 2007's performance level of 0.65. All companies, except Orange and Rockland, had fewer customers affected by power outages, again when major storms are excluded, as shown in Figure 1. This improvement is amplified when Con Edison is excluded with the frequency performance for 2008 at 0.88, which is considerably better than the five-year average of 0.98.

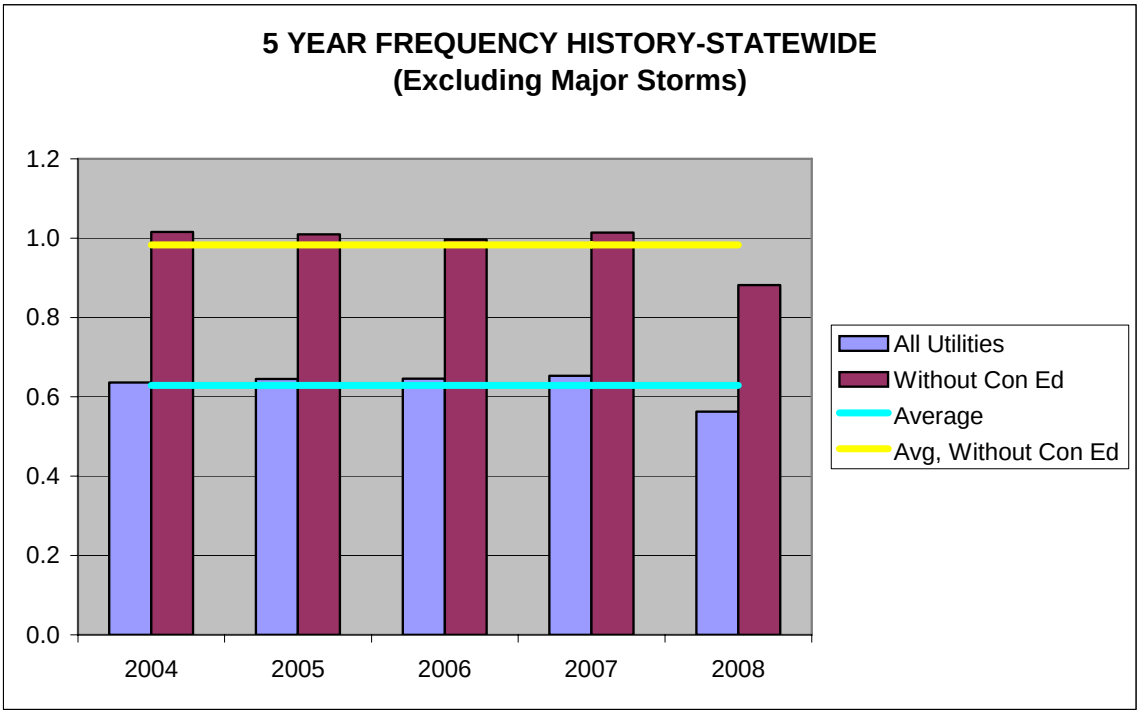

Figure 1: Statewide Frequency Performance

Figure 2 shows the statewide duration index for 2008, excluding major storms. The overall statewide duration index continues to be at a more normal level of 1.93 hours, as compared with 1.95 hours and 1.89 hours in 2005 and 2007, respectively. Con Edison's Long Island City network outages greatly affected the statewide duration in 2006. The statewide duration index, excluding Con Edison, was 1.89 hours in 2008, which is slightly better than 2007 and equal to the five-year average.

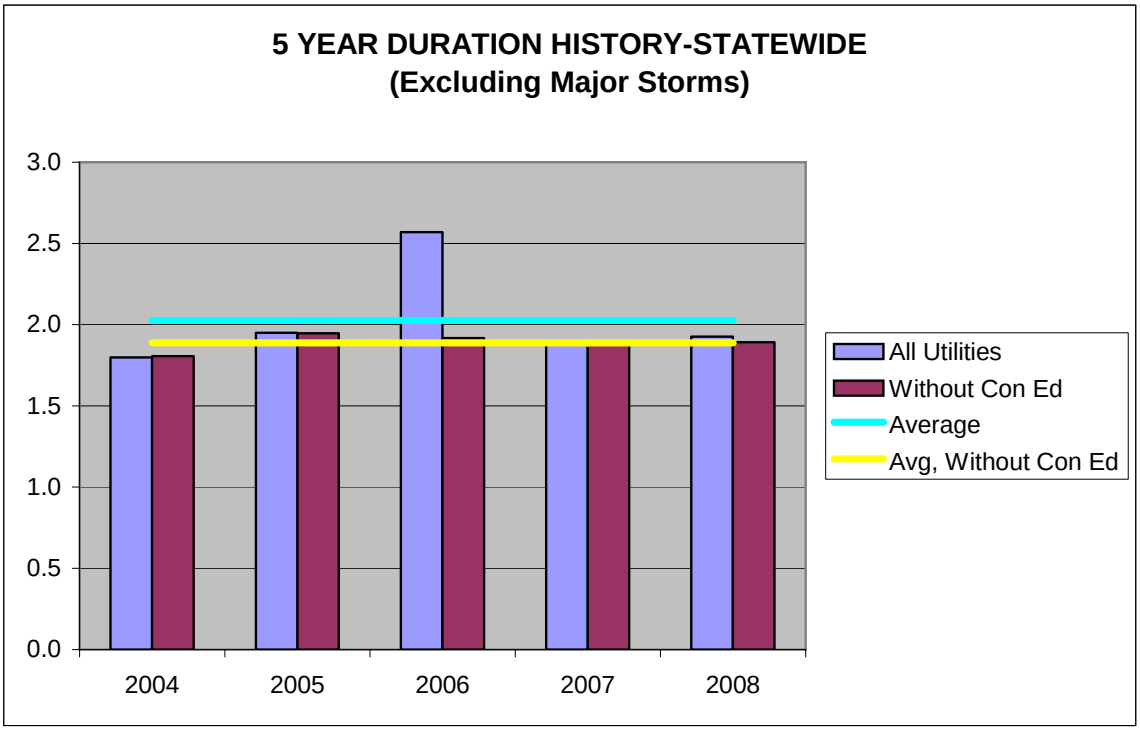

Figure 2: Statewide Duration Performance

In 2008, the weather during the winter and summer months was relatively severe, while there was a moderate amount of adverse weather activities in the spring. This pattern was apparent as numerous winter storms occurred during the early part of the year, culminating in a severe ice storm which significantly affected the Capital Region and Mid-Hudson in December 2008. Several fronts that traversed the State in June and July brought severe storms and/or damaging winds. In general, wind speeds and gusts were higher in 2008 than in prior years; National Grid reported the number of days with winds exceeding 30 miles per hour was 20% higher than the annual norm, and nearly twice the norm in two of its service areas. As a result, the total number of major

storms experienced by utilities increased by 35 storms over last year (Table 1, below). National Grid and NYSEG each experienced more than 20 major storms in 2008.

Table 1: Major Storms in 2008

Company	2007	2008	Change in Major Storms
Con Edison	4	4	0
National Grid	10	24	+14
NYSEG	17	25	+8
RG&E	10	12	+2
Central Hudson	5	9	+4
Orange and Rockland	1	8	+7
Total	**47**	**82**	**+35**

The year 2008 was the second-worst year for severe weather effects in the last five years (Figure 3, below).[12] When including major storms, the 2008 statewide frequency and duration performances were 0.93 and 4.50, respectively. When excluding Con Edison, the 2008 statewide frequency and duration performances including major storms were 1.51 and 4.62, respectively. All four of these measures were worse than the five-year averages. Major storms in 2008 accounted for 71% of the overall customer-hours of interruptions and 39% of the overall number of customers affected.

[12] The Buffalo area experienced a massive ice storm in 2006.

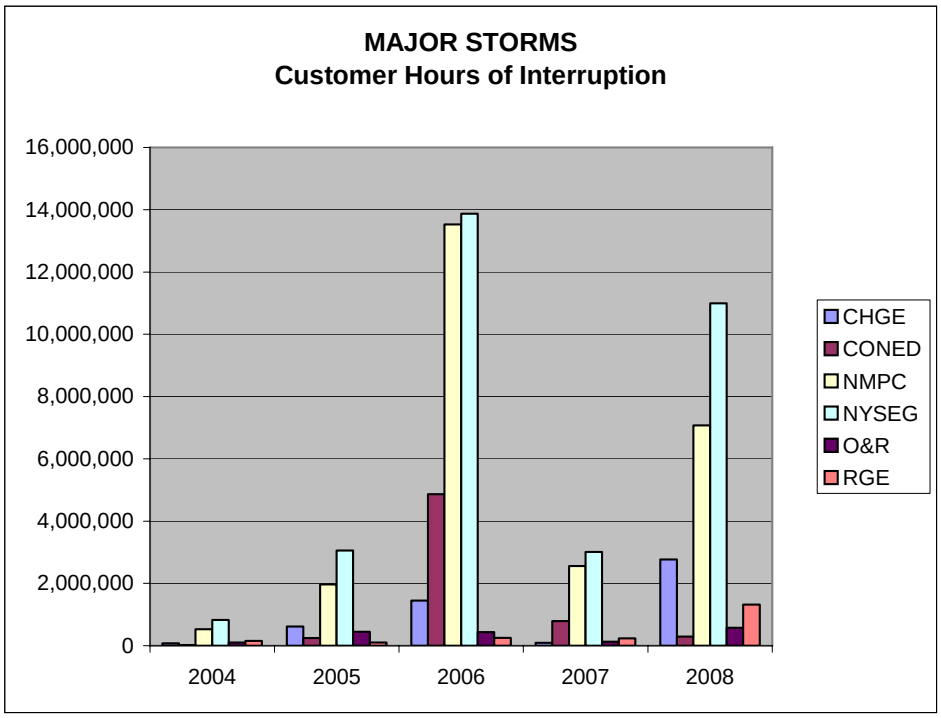

Figure 3: Major Storm Customer Hours

New York State investor-owned electric utilities must submit a report to the Commission addressing all facets of their restoration effort if the restoration period associated with significant storms lasts more than three days.[13] Overall, the utilities responded well to the major storms in 2008, restoring most customers affected within 24-72 hours from the end of a storm. In 2008, there were four reports submitted on major storms as listed in Table 2, below. These storms, especially the December ice storm, as well as the numerous other major storms mentioned earlier, had a greater than historic effect on the total number of hours that customers were without service.

Table 2: Storm reports filed in 2008

Date	Company	Areas Affected	Reason for Interruptions
October	NYSEG	Oneonta, Liberty	Wind and Snow Storm
December	Central Hudson, NYSEG, GRID	Capital District & Troy area	Ice Storm

CON EDISON

[13] 16 NYCRR Part 97, Part 105.4

Table 3: Con Edison's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Network Systems						
Frequency (SAIFI)	0.005	0.006	**0.021**	**0.075**	0.017	0.025
Duration (CAIDI)	3.64	**4.44**	**60.81**	1.79	**6.28**	15.39
Radial System						
Frequency (SAIFI)	0.39	0.51	**0.54**	0.38	0.42	0.45
Duration (CAIDI)	1.64	**1.91**	**2.66**	**2.07**	1.83	2.02

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Con Edison serves approximately 3.2 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

In 2008, the network frequency performances were significantly lower than its historical performances in 2006 and 2007. The Company radial frequency was slightly higher than in 2007 but lower than the five year average. In 2008, the Con Edison spent $562 million to improve the reliability on its electric system including $352 million on relief programs, $122 million on reliability programs, and $88 million on maintenance programs. In 2007 and 2008, the Company expanded its tree trimming budget and has seen a reduction in the number of interruption caused by trees as compared with previous years.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design criteria and underground settings, the majority of interruptions (85%) are associated with the service portion of the network system, as shown in Figure 4. Equipment failures are the second highest (7%) cause for interruptions in 2008. Failures on parts of the network grid itself (secondary feeders or mains) are the third highest cause for interruptions at 6%.

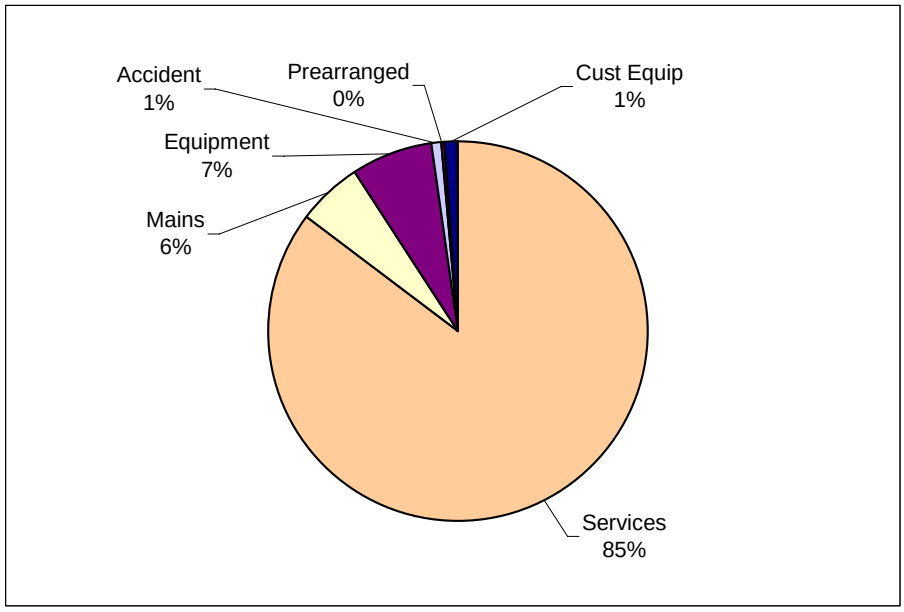

Figure 4: Con Edison's 2008 Network Interruptions by Cause

On its radial system, Con Edison's performance in 2008 was better than the five year average for both frequency and duration. Equipment failures are responsible for 71% of the interruptions on the radial system, followed by trees and accidents at 14% and 8%, respectively, as shown in Figure 5.

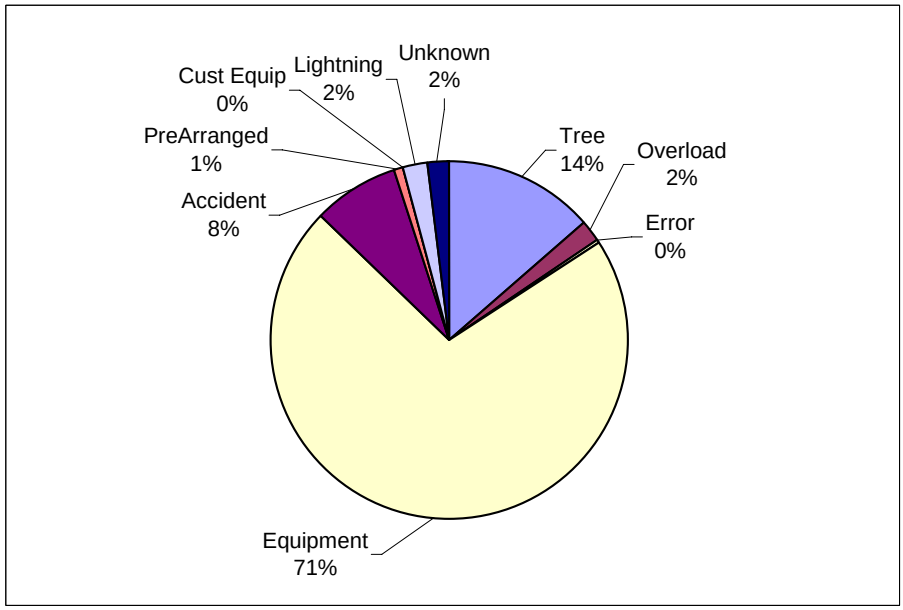

Figure 5: Con Edison's 2008 Radial Interruptions by Cause

Con Edison had one of its worst years for network duration in 2008. In recent years, Con Edison has missed its duration targets for both network and non-network.[14] As part of last year's report, Staff recommended that the Company conduct a detailed self assessment into why its duration performance associated with its radial systems had deteriorated. Con Edison responded by noting that nearly 40% of it longer duration outages are associated with weather events that typically occur in the late afternoon and early evening. As a result, the Company has initiated a study to correlate weather patterns to high duration events. Based on the results of the study, the Company expects to be able to better predict events and ensure sufficient staffing levels are on duty. For 2009, the Con Edison has established a program to experiment with length of shifts (8-hr vs. 12-hr) to determine which provides better coverage, and will be implementing an automated call system to improve crew response times. The Company is also considering dedicated crews to respond to specific outages and using electricians as first responders. In 2008, Con Edison established a new workplace in Westchester County to reduce travel time in that area.

Finally, Con Edison has recently assembled a task force to identify strategies to help improve its network and radial duration performances. Staff will be meeting with the task force in June to review new proposed actions. We are encouraged by the pilot programs and would like to see successful programs applied on a company-wide basis. Therefore, Staff recommends that Con Edison file a report by September 15, 2009 detailing information learned by the task force and during pilot programs. The report should include information on how Con Edison will implement successful programs on a permanent basis. Additionally, Staff recommends that Con Edison perform a self-assessment to identify strategies to improve its network performance and identify corrective actions that are unique to its network system. The self assessment should also be filed by September 15, 2009.

[14] In 2007, a short duration incident affecting a large number of customers resulted in a network duration

NATIONAL GRID

Table 4: National Grid's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.02**	**0.98**	**1.01**	**0.96**	0.75	0.94
Duration (CAIDI)	2.04	**2.32**	2.05	2.01	1.96	2.08

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's territories include metropolitan areas such as the cities of Buffalo, Albany, and Syracuse. National Grid also serves many rural areas in northern New York and the Adirondacks.

Overall, National Grid improved in 2008 and achieved all of its reliability targets. Previously, National Grid missed the frequency target level of 0.93 for each year from 2004 until 2007. Results this year, however, significantly improved and the Company met the target with an end result of 0.75. Duration results were better in 2008 as well; the Company has performed better than the duration target for three consecutive years now. In general, the utility had improved service on a region by region basis.

The overall reliability improvements are partially due to the installation of 432 reclosers, of which most were identified and installed through the Engineering Reliability Review (ERR) process since 2006. The Company installed 234 out of the 432 reclosers during the calendar year of 2008. Results for both the frequency and duration categories were unusually low, due in part to the numerous interruptions resulting from major storms in 2008. Although the Company exhibited a significant reliability improvement through various efforts, it is not likely that results of this magnitude will continue in the future. Staff will encourage the utility to continue with efforts in order to sustain a reasonable level of reliability.

As a result of past reliability results, the Commission placed additional emphasis on National Grid's reliability performance in association with its acquisition of Keyspan, which provides electric distribution services to the Long Island Power

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that was well below historic performances.

Authority. Because of this acquisition, the Commission created an Order requiring the utility to file details of its capital expenditure spending. Staff actively reviews listed projects within this filing. Additionally, Staff provides input and recommendations on the justification and progress of the projects.

As seen in Figure 6, equipment failures are the leading cause of interruptions for National Grid, however, this has been improving over the past five years. The five year average number of interruptions in this category is approximately 4,000; yet this year, the utility reported around 3,500 such occurrences. Furthermore, results showed that the utility reduced the number of customers affected and customer hours for this cause code by almost one half compared to 2007. As evident in the equipment failure cause code results from 2008, the above noted programs appear to be useful methods for improving National Grid's reliability performance in association with equipment failures.

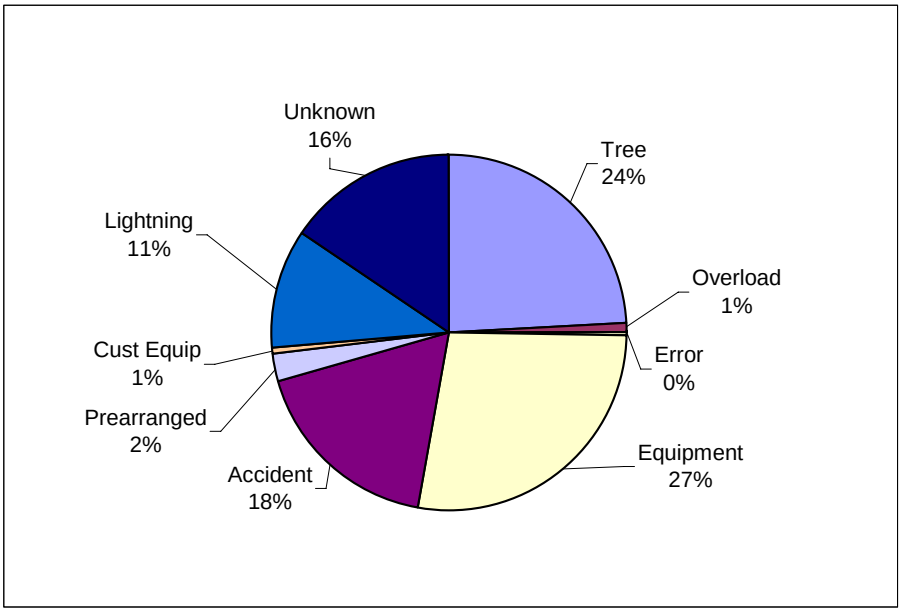


Figure 6: National Grid's 2008 Interruptions by Cause

National Grid made a commitment to spend $1.47 billion on capital improvements to its transmission and distribution system over a five year period from 2007 until 2011. The five-year investment plan contains proposed projects and strategies

to upgrade and replace components on its electric system. In particular, the utility developed a Reliability Enhancement Plan (REP) to improve its performance by focused maintenance work on poor performing circuits and replacement of aging assets. This plan specifically includes a targeted program to enhance the performance of feeders, asset replacement, an improved inspection and maintenance program, and a tree trimming program. The REP also provides for the installation of sectionalizing equipment and animal guards that will help to minimize the number of customers affected when an outage occurs, or to avoid interruptions in general. In conjunction with other programs, National Grid has replaced 665 transformers which were deteriorated or overloaded. As noted above, the Company identified and installed 432 reclosers since 2006. Many of the deteriorated assets addressed by the REP were identified as a result of the utility's inspection program.

The second highest contributor to National Grid's interruption performance for 2008 was tree-related outages; however, the Company showed signs of improvement as compared with last year's results in this area as well. Although the number of interruptions in 2008 for this cause code was fairly close to results of 2007, the number of customers affected and customer hours were reduced from last year by approximately 15%. Prior performance had prompted the utility to shorten its trimming cycle from six years to a more traditional five year period in urban areas. National Grid has also expanded its program to remove "danger" trees outside of the standard clearance zone. With these amplified activities, the utility has gradually increased its spending on distribution tree trimming in recent years. National Grid spent approximately $33 million for distribution trimming during fiscal year 2008. The drop in tree-related interruptions in 2008 was mainly due to a reduced number of interruptions related to fallen trees. Outages caused by broken limbs and tree growth actually increased as compared with last years results. Furthermore, the majority of improvements within this cause code occurred in the Syracuse and Buffalo areas. Tree-related frequency results were actually up in five of National Grid's eight operating divisions.

The number of accident caused interruptions in 2008 as compared with 2007decreased by approximately 20% and yielded a reduction of approximate 25% for both customers affected and customer duration. The number of unknown causes of interruptions in 2008 was fairly equivalent to those of 2007, however, the number of customer affected and customer duration were higher than the 2007 results. The number of 2008 lightning caused interruptions was also close to those of 2007, but the customer affected and customer duration decreased by approximately one half compared to the previous results.

National Grid's capital investment program is having a positive affect. National Grid should continue to pursue infrastructure investments that relate reliability. As part of Case 06-M-0878, Staff will continue to closely monitor the Company's capital improvements.

NEW YORK STATE ELECTRIC AND GAS

Table 5: NYSEG's Historic Performance Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13
Duration (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05

Approximately 840,000 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

The year 2008 showed improvement over last year's poor reliability performance by the Company. NYSEG's 2008 frequency performance of 1.11 was better than both the previous year's performance and its five year average performance level. The 2008 duration performance of 2.08 was also better than both the previous year's performance, however, still slightly higher than the five year average. The two major

contributors to NYSEG's interruptions were tree contacts (41%) and equipment failures (21%), as shown in Figure 7.

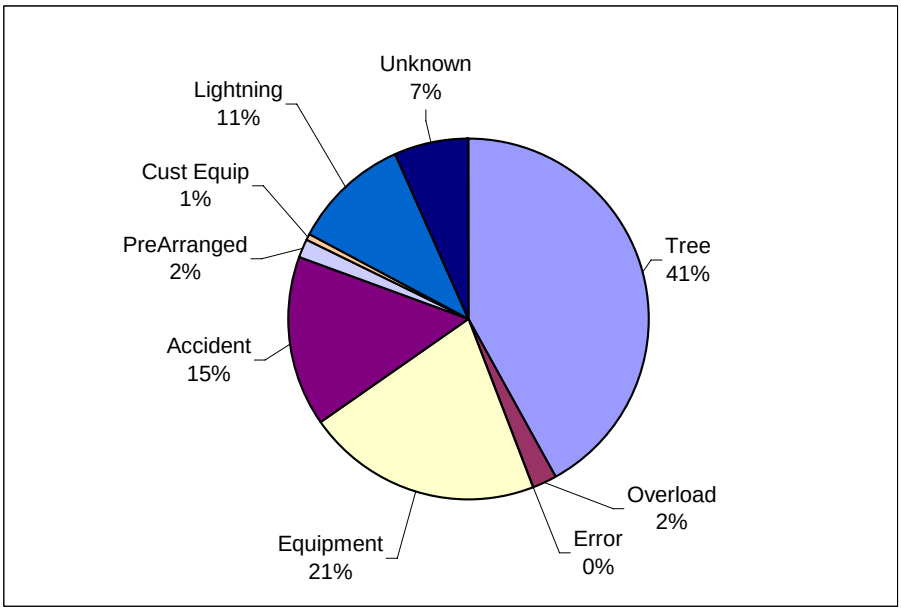


Figure 7: NYSEG's 2008 Interruptions by Cause

Tree related interruptions have consistently had the greatest impact on NYSEG's interruption performance. As shown in Table 6 below, NYSEG's performance has continuously declined with respect to tree caused interruptions. In last year's reliability report, Staff recommended that NYSEG perform a self-assessment of its existing distribution tree trimming program based on its declining performance and reduced expenditures on tree trimming. On January 7, 2009, NYSEG responded to Staff's recommendation stating that increased costs for tree trimming efforts per mile have reduced the number of overall miles completed each year. The report showed

Table 6: NYSEG's Reliability Performance with respect to Tree Caused Interruptions

Year	Customers Affected by Tree Interruptions	Customer Hours for Tree Interruptions	Number of Interruptions due to Trees
2004	205,245	477,623	3,002
2005	288,347	666,940	4,090
2006	297,893	735,250	3,779
2007	333,469	865,694	3,997
2008	349,065	886,543	4,215

approximately half the circuit miles have been trimmed in 2007 and 2008 when compared to 2002 through 2005 levels. The number of customers affected by tree events has increased by 32% compared to the average for the years 2002 through 2005.

In Case 05-E-1222, NYSEG was allowed $17.7 million in rates for tree trimming on an annual basis effective in 2007. The Company indicated, however, that it has spent less in tree trimming on its distribution system than what was allowed in rates.

NYSEG's existing tree trimming program requires cycle trimming on all of the 35 kV circuits, but only the three phase sections of its 12 kV and 5 kV circuits, and single phase sections of these circuits on an ad hoc basis. The Company recommended in its self-assessment that in order to reduce tree caused interruptions, the existing tree trimming program should be expanded to perform cycle trimming on all single phase portions of its circuits. Given that NYSEG has not completed its planned trimming in recent years, Staff has concerns about NYSEG's tree trimming program.

Even though both frequency and duration improved in 2008 as compared with 2007, Staff continues to be concerned with NYSEG's overall approach to managing its tree caused interruptions. NYSEG's decision to reduce its tree trimming activities despite declining performance in this area needs to be examined. As a result, Staff will be seeking detailed information and explanations of trimming activities performed, spending variances, and quality assurance as part of the newly established Case 09-E-0472.

Equipment failures are the second highest cause of interruptions. In the Iberdrola merger (Case 07-M-0906), NYSEG was required to submit a condition assessment report. This report was received by Staff on December 8, 2008, and provided information on all of the electrical equipment and assets within its service territory and identified how age is a continued concern on the entire electrical system. The report concluded that NYSEG's electrical system is in "sound" condition. Over the past five years, however, NYSEG's reliability data show a steady increase in the number of interruptions caused by the failure or poor performance of the system equipment.

To proactively address the Company's aging infrastructure and equipment failure issues, NYSEG started a Transmission and Distribution Infrastructure Replacement Program (TDIRP). This program has been in place since 2005 and is the principal funding source for projects that address overall system condition issues. Overall Staff views this program as beneficial; however, funding for the program has been on the decline, and Staff is concerned whether NYSEG is committing appropriate funding resources to making the necessary infrastructure investments through TDIRP.

Another concern noted in Staff's reliability report last year was a declining trend in field staffing/personnel levels. As required, NYSEG provided its self-assessment that stated cost pressures have diminished its ability to increase or even maintain the field personnel levels once held in previous years. The Company goes on to say that while it continues to maintain sufficient numbers of workers to achieve the established reliability performance targets, increasing the number of qualified field personnel by approximately 10% may support improved duration numbers. As shown in Table 7 below, NYSEG has increased in total field personnel number for 2008. The increases, however, are for apprentice workers and not the qualified workers the Company is seeking.[15]

Table 7: NYSEG's Field Personnel Information

	2004	2005	2006	2007	2008
Total Number of Field Personnel	646	651	619	608	662
Percent Change from Previous Year	----	+0.8%	-4.9%	-1.8%	+8.2%

ROCHESTER GAS AND ELECTRIC

Table 8: RG&E's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81
Duration (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81

[15] It takes approximately 3 years for an apprentice to be considered a qualified worker.

RG&E serves approximately 360,000 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better performing utilities within the state. The Company has not failed its RPM targets of 0.90 for frequency and 1.90 for duration as established in its rate orders. As shown in Table 8, above, RG&E's performance for frequency and duration continue to be fairly consistent with its five year average. In 2008, the Company's frequency performance of 0.78 is the lowest since 2004. RG&E's duration performance of 1.85 in 2008 was slightly higher than both the previous year's performance. Figure 8 shows that the two major contributors to interruptions continue to be equipment failures (31%) and tree contacts (21%). The levels are slightly higher than the five year averages of both equipment failures and tree contacts.

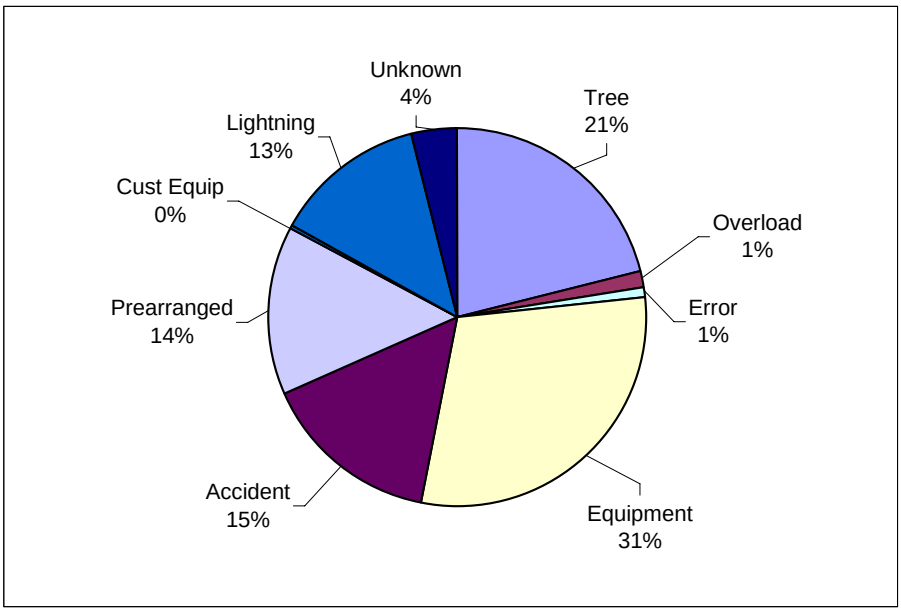


Figure 8: RG&E's 2008 Interruptions by Cause

Like NYSEG, RG&E was required to submit a conditions assessment report as part of the Iberdrola merger agreement. This report was received by Staff on December 8, 2008, and concluded that RGE's electrical system is in "sound" condition. Equipment failures, however, continues to be RG&E's highest contributor to its interruption performance. In 2007, RG&E implemented its own Transmission and Distribution Infrastructure Replacement Program (TDIRP), similar to that used by NYSEG, to address the Company's aging infrastructure and equipment failure issues. Staff encourages RG&E to make necessary infrastructure investments through TDIRP to ensure safe and reliable service to its customers.

CENTRAL HUDSON GAS AND ELECTRIC

Table 9: Central Hudson's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	**1.36**	1.44	**1.59**	1.42	1.27	1.42
Duration (CAIDI)	**2.35**	2.70	**2.58**	2.43	2.47	2.51

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh. Central Hudson's RPM targets were reestablished at 1.45 for frequency and 2.50 for duration in its most recent rate order, effective in 2007.[16]

Central Hudson' frequency performance of 1.27 in 2008 was its best in five years, considerably better than its five-year average (Table 9, above). The 2008 duration performance of 2.47 was better than the five-year average, but still close to the RPM target of 2.50, however. Figure 9 shows that 37% of customer interruptions are due to tree related issues, followed by accidents at 22%.

[16] As part of the joint agreement adopted in the last rate order, Central Hudson was not assessed revenue adjustments for 2005 performances.

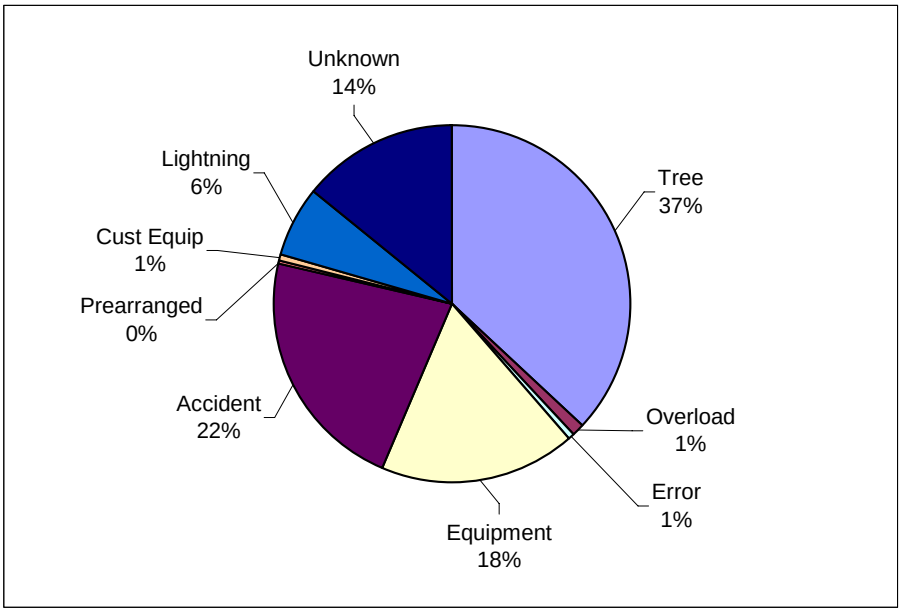


Figure 9: Central Hudson's 2008 Interruptions by Cause

Central Hudson has had a reduction in equipment failures resulting in customer outages since 2005 (see Table 10 below); in 2008, equipment failures were responsible for only 18% of the interruptions.

Table 10: Customers Affected by Service Interruptions

Year	Tree	Equipment
2004	136,933	89,177
2005	155,504	109,190
2006	172,850	104,263
2007	156,053	99,290
2008	137,170	86,115

In last year's report Staff directed that Central Hudson perform a self assessment of its line clearance program. Staff reviewed Central Hudson's report and found it satisfactory. It does appear that Central Hudson has been addressing tree caused interruptions in a logical way, expanding lessons learned in its enhanced clearance program to the rest of the system and positive results might have begun to be seen (see Table 10, above). In its current rate case proceeding, based on the recommendation of its

consultant and actual experience, Central Hudson proposed (and Staff supported) expanding its enhanced tree trimming program of critical three-phase lines as well as the implementation of the modified enhanced program for the rest of the system, both single and multi-phase. A possible encouraging trend in reduced tree outages may also be seen in Table 9 (above) and will be something we will monitor.

Central Hudson's annual reliability report indicates one driver of outage duration is overloaded distribution transformers. Several districts noted they are replacing transformers before they fail using a combination of Transformer Load Management database and field checks with line foremen. This approach appears to have merit especially as preparation for warmer summers, such as was experienced in 2008.

ORANGE AND ROCKLAND

Table 11: O&R's Historic Performances Excluding Major Storms

Metric	2004	2005	2006	2007	2008	5-Year Average
Frequency (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22
Duration (CAIDI)	**1.61**	**1.71**	1.51	1.60	**1.83**	1.65

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland is the smallest of the major investor-owned electric utilities. It serves approximately 217,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2008, the Company met its reliability performance mechanism target for frequency. The 2008 frequency performance, although higher than 2007, was still below the Company's five year average performance level. Orange and Rockland, however, failed its reliability performance mechanism for duration in 2008 with a performance of 1.83.

As shown in Figure 10 (below), equipment failures (34%) and trees (31%) caused the majority of interruptions in 2008. Orange and Rockland is addressing reliability issues due to equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable Maintenance and

Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

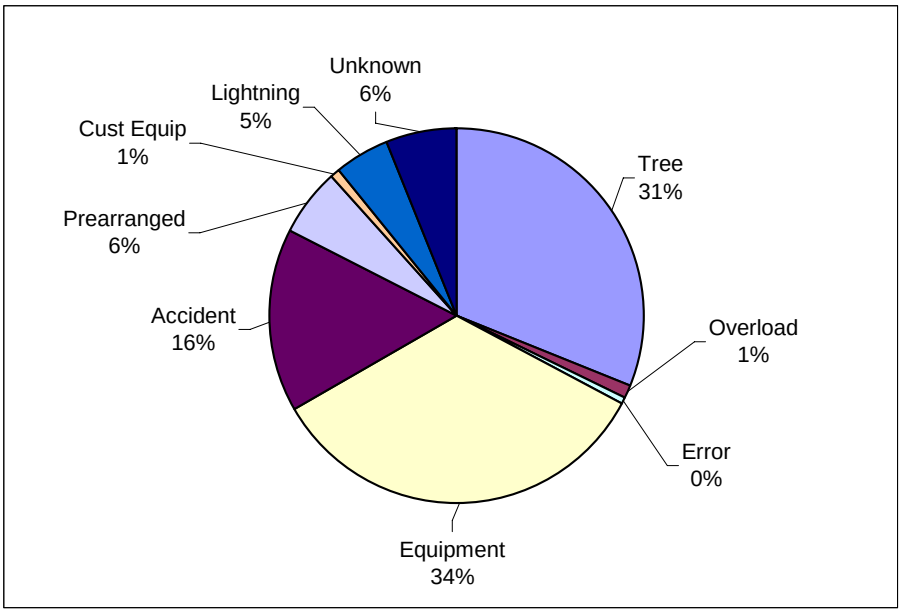


Figure 10: Orange and Rockland's 2008 Interruptions by Cause

The Company is addressing the tree concerns through increased efforts on its trimming programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify additional efforts to address key areas with recurring outages such as a recurring outage identification program and a "cycle buster" trimming program. These programs should help reduce the impact of tree contacts on the Company's electrical system through the coming years.

Orange and Rockland's duration performance in 2008 was slightly above its RPM target of 1.70. The Company had performed better than this target in both 2006 and 2007. Since its last rate filing (Case 07-0949), Orange and Rockland has been expressing concern that distribution automation equipment is negatively impacting its duration performance and recently made a presentation to Staff on the issue. As a result, Staff is working closely with the Company to determine the identifiable affects distribution automation has on the duration measure.

Staff believes that Orange and Rockland is appropriately installing more distribution automation equipment, increasing tree trimming efforts, and performing needed capital improvement projects to improve overall reliability. Equipment Failures and Tree Contacts continue to be the major causes of interruptions throughout the past five-years and this performance trend remains consistent throughout each operating division as well. Orange and Rockland's has been striving to control tree and equipment related interruptions for several years now. Even though immediate drastic changes are not anticipated due to the nature of the causes, small and steady improvements are expected in the years to come with the finalization of additional reliability projects.

RECOMMENDATIONS

The following is a summary of Staff recommendations based on our analysis of reliability performances in 2008. Additionally, NYSEG will have to respond to actions taken as part of Case 04-E-0472.

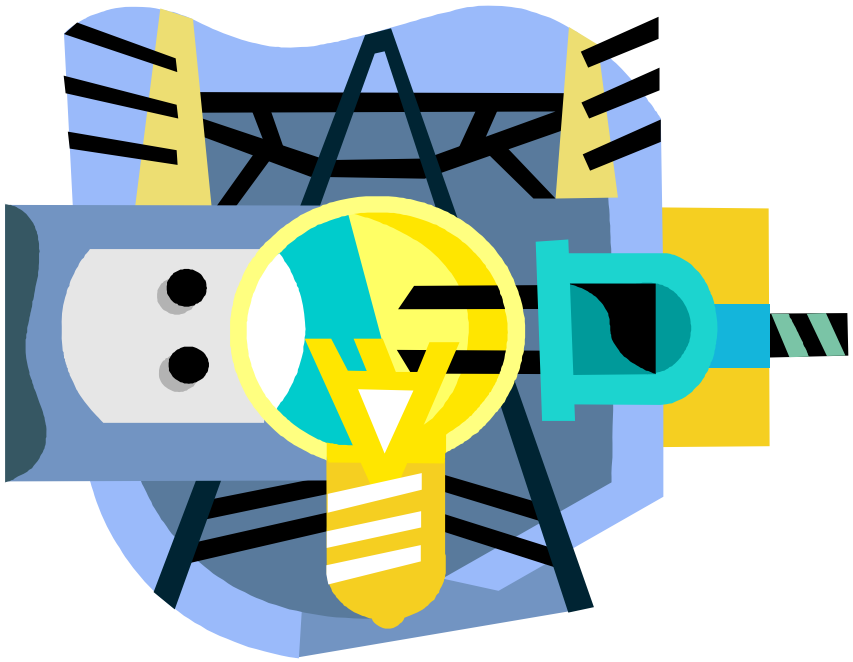
1. Con Edison should file a report no later than September 15, 2009 detailing information learned during pilot programs related to improving its duration performance and explaining how successful programs from the pilot programs would be implemented on a permanent basis.

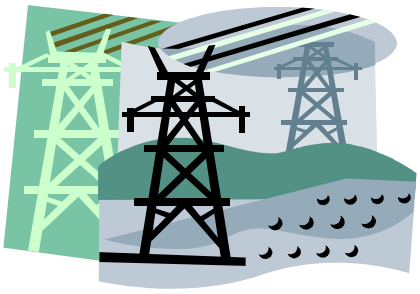
2. Con Edison should perform a self-assessment to identify strategies to improve its network duration performance and identify corrective actions that are unique to its network system. The self assessment should be filed no later than September 15, 2009.

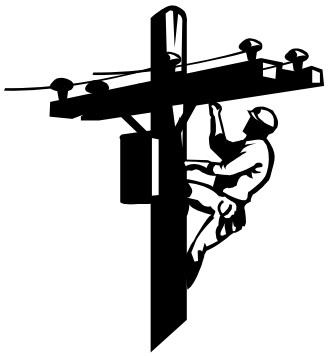
APPENDIX

2008 INTERRUPTON REPORT

The 2008 Interruption Report







Office of Electricity Gas and Water

June, 2009

ATTACHMENT
Definitions and Explanations of Terms Used in the 2008
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2008**, customers served is the number of customers as of 12/31/2008. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2007.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2007, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.36	1.44	1.59	1.42	1.27	1.42
DURATION	2.35	2.70	2.58	2.43	2.47	2.51
CONED						
FREQUENCY	0.11	0.14	0.16	0.16	0.13	0.14
DURATION	1.71	1.99	8.23	1.97	2.27	3.23
LIPA *						
FREQUENCY	0.83	0.85	0.75	0.90	0.77	0.82
DURATION	1.04	1.07	1.37	1.20	1.36	1.21
NAT GRID						
FREQUENCY	1.02	0.98	1.01	0.96	0.75	0.94
DURATION	2.04	2.32	2.05	2.01	1.96	2.08
NYSEG						
FREQUENCY	1.13	1.12	1.12	1.20	1.11	1.13
DURATION	1.96	1.96	2.01	2.22	2.08	2.05
O&R						
FREQUENCY	1.30	1.36	1.23	1.03	1.19	1.22
DURATION	1.61	1.71	1.51	1.60	1.83	1.65
RG&E						
FREQUENCY	0.86	0.79	0.79	0.83	0.78	0.81
DURATION	1.84	1.87	1.78	1.73	1.85	1.81
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.02	1.01	1.00	1.01	0.88	0.98
DURATION	1.81	1.95	1.92	1.88	1.89	1.89
STATEWIDE (WITH CONED)						
FREQUENCY	0.64	0.65	0.65	0.65	0.56	0.63
DURATION	1.80	1.95	2.57	1.89	1.93	2.03

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2004	2005	2006	2007	2008	5 YR AVG
CHGE						
FREQUENCY	1.42	1.83	2.20	1.51	2.15	1.82
DURATION	2.45	3.27	4.12	2.51	5.76	3.62
CONED						
FREQUENCY	0.11	0.15	0.23	0.18	0.14	0.16
DURATION	1.74	2.32	12.31	3.12	2.71	4.44
LIPA *						
FREQUENCY	0.91	1.07	1.17	1.03	1.09	1.05
DURATION	1.12	1.42	1.99	1.37	1.65	1.51
NAT GRID						
FREQUENCY	1.12	1.28	1.48	1.31	1.37	1.31
DURATION	2.15	2.76	7.18	2.70	4.32	3.82
NYSEG						
FREQUENCY	1.41	1.77	1.79	1.71	2.14	1.76
DURATION	2.26	3.27	10.32	3.62	7.07	5.31
O&R						
FREQUENCY	1.46	1.83	1.81	1.17	1.64	1.58
DURATION	1.77	2.42	2.15	1.92	2.94	2.24
RG&E						
FREQUENCY	0.98	0.93	0.98	1.16	1.36	1.08
DURATION	2.04	1.90	2.14	1.80	3.77	2.33
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.15	1.36	1.48	1.31	1.51	1.36
DURATION	1.97	2.60	6.02	2.56	4.62	3.55
STATEWIDE (WITH CONED)						
FREQUENCY	0.71	0.85	0.96	0.83	0.93	0.86
DURATION	1.95	2.58	6.65	2.61	4.50	3.66

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	50,242	54,434	55,211	55,425	53,758	53,814
Number of Customer-Hours	8,015,041	8,631,869	8,439,916	8,439,464	7,399,179	8,185,094
Number of Customers Affected	4,439,677	4,433,386	4,400,072	4,495,428	3,910,426	4,335,798
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.81	1.95	1.92	1.88	1.89	1.89
Average Duration Per Customers Served	1.83	1.97	1.91	1.90	1.67	1.86
Interruptions Per 1000 Customers Served	11.49	12.39	12.51	12.50	12.12	12.20
Number of Customers Affected Per Customer Served (SAIFI)	1.02	1.01	1.00	1.01	0.88	0.98

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	59,458	65,019	65,752	66,746	65,403	64,476
Number of Customer-Hours	8,596,012	9,506,355	12,603,322	9,429,452	8,326,562	9,692,341
Number of Customers Affected	4,779,817	4,873,534	4,905,844	4,996,967	4,319,550	4,775,142
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.80	1.95	2.57	1.89	1.93	2.03
Average Duration Per Customers Served	1.14	1.26	1.66	1.23	1.08	1.28
Interruptions Per 1000 Customers Served	7.91	8.61	8.65	8.72	8.51	8.48
Number of Customers Affected Per Customer Served (SAIFI)	0.64	0.65	0.65	0.65	0.56	0.63

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	53,535	66,767	70,872	61,753	73,150	65,215
Number of Customer-Hours	9,852,887	15,493,419	39,413,242	14,848,512	30,962,269	22,114,066
Number of Customers Affected	5,009,438	5,960,730	6,548,910	5,808,516	6,705,414	6,006,602
Number of Customers Served	4,392,363	4,415,079	4,434,324	4,436,307	4,429,635	4,421,542
Average Duration Per Customer Affected (CAIDI)	1.97	2.60	6.02	2.56	4.62	3.55
Average Duration Per Customers Served	2.25	3.53	8.93	3.35	6.98	5.01
Interruptions Per 1000 Customers Served	12.24	15.20	16.05	13.93	16.49	14.78
Number of Customers Affected Per Customer Served (SAIFI)	1.15	1.36	1.48	1.31	1.51	1.36

STATEWIDE (WITH CON ED)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	62,806	77,937	86,734	74,261	85,548	77,457
Number of Customer-Hours	10,454,054	16,612,929	48,437,221	16,630,252	32,188,186	24,864,528
Number of Customers Affected	5,355,101	6,442,863	7,282,114	6,379,276	7,158,329	6,523,537
Number of Customers Served	7,553,747	7,602,291	7,652,745	7,681,104	7,701,361	7,638,250
Average Duration Per Customer Affected (CAIDI)	1.95	2.58	6.65	2.61	4.50	3.66
Average Duration Per Customers Served	1.39	2.20	6.37	2.17	4.19	3.27
Interruptions Per 1000 Customers Served	8.36	10.32	11.41	9.70	11.14	10.18
Number of Customers Affected Per Customer Served (SAIFI)	0.71	0.85	0.96	0.83	0.93	0.86

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CENTRAL HUDSON
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,514	6,911	7,538	6,386	6,857	6,841
Number of Customer-Hours	917,136	1,125,389	1,201,109	1,021,859	933,993	1,039,897
Number of Customers Affected	389,969	416,547	464,765	420,769	377,564	413,923
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.35	2.70	2.58	2.43	2.47	2.51
Average Duration Per Customers Served	3.21	3.89	4.10	3.46	3.13	3.56
Interruptions Per 1000 Customers Served	22.77	23.91	25.74	21.62	22.98	23.40
Number of Customers Affected Per Customer Served (SAIFI)	1.36	1.44	1.59	1.42	1.27	1.42

CENTRAL HUDSON
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	6,756	8,309	10,066	6,681	9,887	8,340
Number of Customer-Hours	994,057	1,735,705	2,649,690	1,117,802	3,705,277	2,040,506
Number of Customers Affected	405,534	530,319	643,778	444,813	642,949	533,479
Number of Customers Served	289,080	292,816	295,368	298,386	300,621	295,254
Average Duration Per Customer Affected (CAIDI)	2.45	3.27	4.12	2.51	5.76	3.62
Average Duration Per Customers Served	3.47	6.00	9.05	3.78	12.42	6.95
Interruptions Per 1000 Customers Served	23.62	28.74	34.38	22.62	33.13	28.50
Number of Customers Affected Per Customer Served (SAIFI)	1.42	1.83	2.20	1.51	2.15	1.82

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,216	10,585	10,541	11,321	11,645	10,662
Number of Customer-Hours	580,971	874,487	4,163,407	989,988	927,383	1,507,247
Number of Customers Affected	340,140	440,148	505,772	501,539	409,124	439,345
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.71	1.99	8.23	1.97	2.27	3.23
Average Duration Per Customers Served	0.18	0.28	1.31	0.31	0.29	0.47
Interruptions Per 1000 Customers Served	2.93	3.35	3.31	3.52	3.59	3.34
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.14	0.16	0.16	0.13	0.14

CON ED (SYSTEM)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	9,271	11,170	15,862	12,508	12,398	12,242
Number of Customer-Hours	601,167	1,119,510	9,023,979	1,781,740	1,225,917	2,750,463
Number of Customers Affected	345,663	482,133	733,204	570,760	452,915	516,935
Number of Customers Served	3,161,384	3,187,212	3,218,421	3,244,797	3,271,726	3,216,708
Average Duration Per Customer Affected (CAIDI)	1.74	2.32	12.31	3.12	2.71	4.44
Average Duration Per Customers Served	0.19	0.35	2.83	0.55	0.38	0.86
Interruptions Per 1000 Customers Served	2.95	3.53	4.98	3.89	3.82	3.83
Number of Customers Affected Per Customer Served (SAIFI)	0.11	0.15	0.23	0.18	0.14	0.16

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,360	4,967	4,274	5,571	5,485	4,931
Number of Customer-Hours	44,195	59,566	2,947,306	316,477	252,964	724,101
Number of Customers Affected	12,138	13,406	48,467	176,430	40,301	58,148
Number of Customers Served	2,319,321	2,339,622	2,363,897	2,361,145	2,385,760	2,353,949
Average Duration Per Customer Affected (CAIDI)	3.64	4.44	60.81	1.79	6.28	15.39
Average Duration Per Customers Served	0.02	0.03	1.26	0.13	0.11	0.31
Interruptions Per 1000 Customers Served	1.89	2.14	1.83	2.36	2.32	2.11
Number of Customers Affected Per Customer Served (SAIFI)	0.005	0.006	0.021	0.075	0.017	0.025

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (RADIAL)
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,856	5,618	6,267	5,750	6,160	5,730
Number of Customer-Hours	536,776	814,921	1,216,101	673,511	674,419	783,146
Number of Customers Affected	328,002	426,742	457,305	325,109	368,823	381,196
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.64	1.91	2.66	2.07	1.83	2.02
Average Duration Per Customers Served	0.64	0.97	1.43	0.79	0.76	0.92
Interruptions Per 1000 Customers Served	5.81	6.67	7.39	6.73	6.97	6.72
Number of Customers Affected Per Customer Served (SAIFI)	0.39	0.51	0.54	0.38	0.42	0.45

CON ED (RADIAL)
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	4,911	6,203	11,588	6,937	6,913	7,310
Number of Customer-Hours	556,972	1,059,944	6,076,673	1,465,264	972,954	2,026,361
Number of Customers Affected	333,525	468,727	684,737	394,330	412,614	458,787
Number of Customers Served	842,063	847,590	854,524	883,652	885,966	862,759
Average Duration Per Customer Affected (CAIDI)	1.67	2.26	8.87	3.72	2.36	3.78
Average Duration Per Customers Served	0.67	1.26	7.17	1.71	1.10	2.38
Interruptions Per 1000 Customers Served	5.88	7.37	13.67	8.12	7.82	8.57
Number of Customers Affected Per Customer Served (SAIFI)	0.40	0.56	0.81	0.46	0.47	0.54

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

LIPA
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,423	17,728	18,634	18,736	18,135	17,731
Number of Customer-Hours	942,669	999,412	1,129,275	1,190,411	1,166,613	1,085,676
Number of Customers Affected	908,253	931,276	823,396	995,077	856,405	902,881
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.04	1.07	1.37	1.20	1.36	1.21
Average Duration Per Customers Served	0.87	0.91	1.02	1.07	1.05	0.98
Interruptions Per 1000 Customers Served	14.16	16.17	16.89	16.90	16.33	16.09
Number of Customers Affected Per Customer Served (SAIFI)	0.83	0.85	0.75	0.90	0.77	0.82

LIPA
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	15,956	21,317	24,905	20,077	20,471	20,545
Number of Customer-Hours	1,105,002	1,675,011	2,564,134	1,564,559	1,998,270	1,781,395
Number of Customers Affected	986,170	1,177,059	1,289,698	1,142,365	1,208,292	1,160,717
Number of Customers Served	1,096,472	1,103,162	1,108,540	1,110,853	1,114,716	1,106,749
Average Duration Per Customer Affected (CAIDI)	1.12	1.42	1.99	1.37	1.65	1.51
Average Duration Per Customers Served	1.01	1.53	2.32	1.41	1.80	1.62
Interruptions Per 1000 Customers Served	14.65	19.44	22.58	18.11	18.43	18.64
Number of Customers Affected Per Customer Served (SAIFI)	0.91	1.07	1.17	1.03	1.09	1.05

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NATIONAL GRID
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	13,917	13,680	13,665	14,606	12,939	13,761
Number of Customer-Hours	3,274,229	3,598,884	3,289,340	3,045,363	2,334,754	3,108,514
Number of Customers Affected	1,602,708	1,551,448	1,607,461	1,518,634	1,188,585	1,493,767
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.04	2.32	2.05	2.01	1.96	2.08
Average Duration Per Customers Served	2.08	2.28	2.07	1.92	1.46	1.96
Interruptions Per 1000 Customers Served	8.82	8.66	8.62	9.19	8.12	8.68
Number of Customers Affected Per Customer Served (SAIFI)	1.02	0.98	1.01	0.96	0.75	0.94

NATIONAL GRID
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	14,760	16,211	16,279	16,222	18,301	16,355
Number of Customer-Hours	3,800,127	5,568,127	16,813,162	5,605,931	9,410,833	8,239,636
Number of Customers Affected	1,766,092	2,020,066	2,341,235	2,075,480	2,177,786	2,076,132
Number of Customers Served	1,580,131	1,585,383	1,589,949	1,594,179	1,583,311	1,586,591
Average Duration Per Customer Affected (CAIDI)	2.15	2.76	7.18	2.70	4.32	3.82
Average Duration Per Customers Served	2.41	3.52	10.61	3.53	5.90	5.19
Interruptions Per 1000 Customers Served	9.35	10.26	10.27	10.20	11.48	10.31
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.28	1.48	1.31	1.37	1.31

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NYSEG
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	8,946	10,190	9,682	10,317	10,027	9,832
Number of Customer-Hours	1,866,112	1,872,868	1,913,315	2,299,142	1,980,213	1,986,330
Number of Customers Affected	952,258	955,009	953,941	1,034,113	953,105	969,685
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	1.96	1.96	2.01	2.22	2.08	2.05
Average Duration Per Customers Served	2.21	2.21	2.24	2.68	2.30	2.32
Interruptions Per 1000 Customers Served	10.59	12.00	11.33	12.00	11.66	11.48
Number of Customers Affected Per Customer Served (SAIFI)	1.13	1.12	1.12	1.20	1.11	1.13

NYSEG
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	10,269	14,364	12,835	12,928	17,008	13,481
Number of Customer-Hours	2,687,162	4,926,508	15,787,602	5,314,914	12,974,501	8,338,137
Number of Customers Affected	1,188,998	1,504,612	1,529,247	1,469,825	1,836,251	1,505,787
Number of Customers Served	849,335	854,508	859,440	859,963	857,517	856,153
Average Duration Per Customer Affected (CAIDI)	2.26	3.27	10.32	3.62	7.07	5.31
Average Duration Per Customers Served	3.18	5.80	18.48	6.18	15.09	9.75
Interruptions Per 1000 Customers Served	12.15	16.91	15.02	15.04	19.78	15.78
Number of Customers Affected Per Customer Served (SAIFI)	1.41	1.77	1.79	1.71	2.14	1.76

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

O&R
Excluding Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,546	2,718	2,688	2,596	2,993	2,708
Number of Customer-Hours	440,617	493,591	397,977	356,514	470,431	431,826
Number of Customers Affected	274,124	289,022	264,121	222,895	256,943	261,421
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.61	1.71	1.51	1.60	1.83	1.65
Average Duration Per Customers Served	2.09	2.32	1.85	1.65	2.18	2.02
Interruptions Per 1000 Customers Served	12.10	12.80	12.53	12.00	13.88	12.66
Number of Customers Affected Per Customer Served (SAIFI)	1.30	1.36	1.23	1.03	1.19	1.22

O&R
Including Major Storms

	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,729	3,123	3,546	2,738	3,655	3,158
Number of Customer-Hours	542,652	942,127	836,046	483,938	1,043,235	769,600
Number of Customers Affected	307,396	388,553	388,164	252,650	354,315	338,216
Number of Customers Served	212,352	214,546	216,268	215,694	217,373	215,247
Average Duration Per Customer Affected (CAIDI)	1.77	2.42	2.15	1.92	2.94	2.24
Average Duration Per Customers Served	2.58	4.44	3.90	2.24	4.84	3.60
Interruptions Per 1000 Customers Served	12.97	14.71	16.53	12.66	16.95	14.76
Number of Customers Affected Per Customer Served (SAIFI)	1.46	1.83	1.81	1.17	1.64	1.58

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

RG&E
Excluding Major Storms

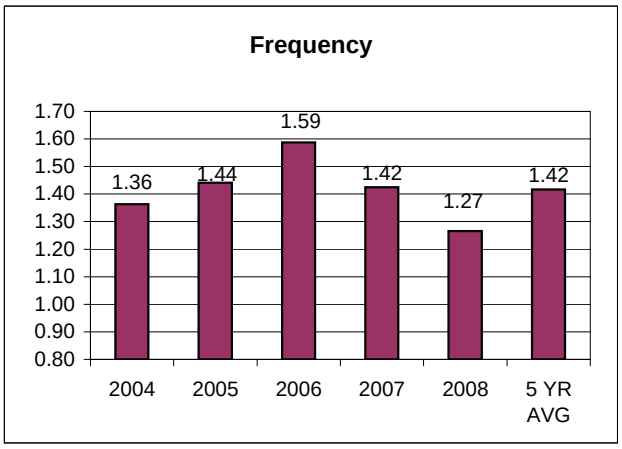
	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	2,896	3,207	3,004	2,784	2,807	2,940
Number of Customer-Hours	574,278	541,725	508,899	526,175	513,175	532,850
Number of Customers Affected	312,365	290,084	286,388	303,940	277,824	294,120
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	1.84	1.87	1.78	1.73	1.85	1.81
Average Duration Per Customers Served	1.58	1.48	1.40	1.44	1.44	1.47
Interruptions Per 1000 Customers Served	7.96	8.79	8.24	7.63	7.86	8.10
Number of Customers Affected Per Customer Served (SAIFI)	0.86	0.79	0.79	0.83	0.78	0.81

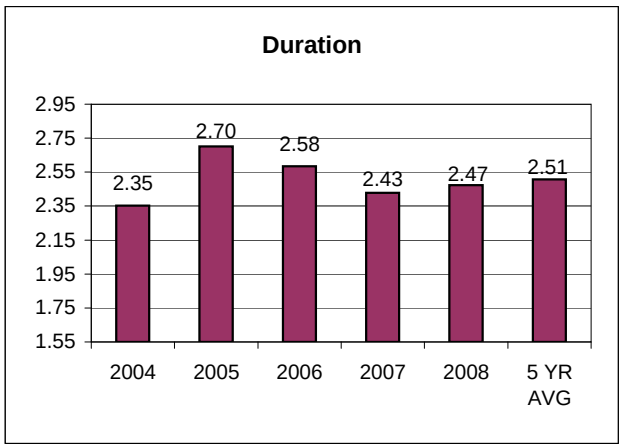
RG&E
Including Major Storms

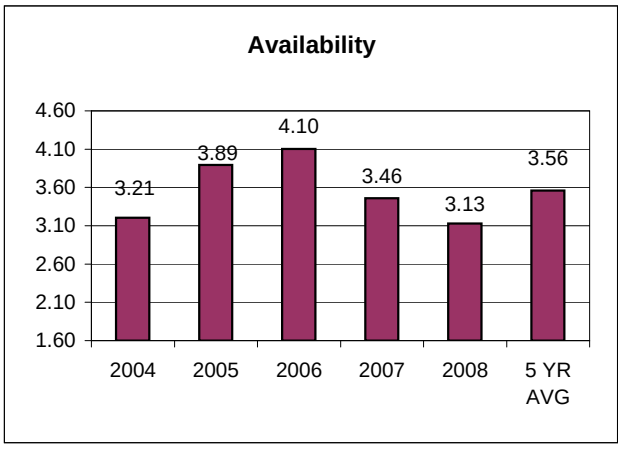
	2004	2005	2006	2007	2008	5 YR AVG
Number of Interruptions	3,065	3,443	3,241	3,107	3,828	3,337
Number of Customer-Hours	723,887	645,940	762,609	761,368	1,830,153	944,791
Number of Customers Affected	355,248	340,121	356,788	423,383	485,821	392,272
Number of Customers Served	364,993	364,664	364,759	357,232	356,097	361,549
Average Duration Per Customer Affected (CAIDI)	2.04	1.90	2.14	1.80	3.77	2.33
Average Duration Per Customers Served	1.99	1.77	2.09	2.09	5.12	2.61
Interruptions Per 1000 Customers Served	8.43	9.43	8.89	8.52	10.72	9.20
Number of Customers Affected Per Customer Served (SAIFI)	0.98	0.93	0.98	1.16	1.36	1.08

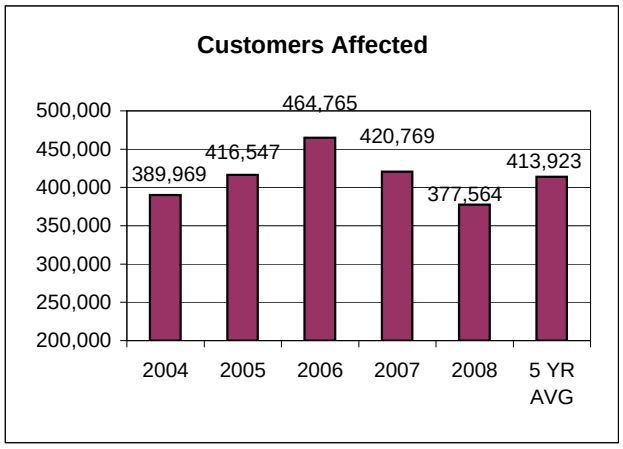
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

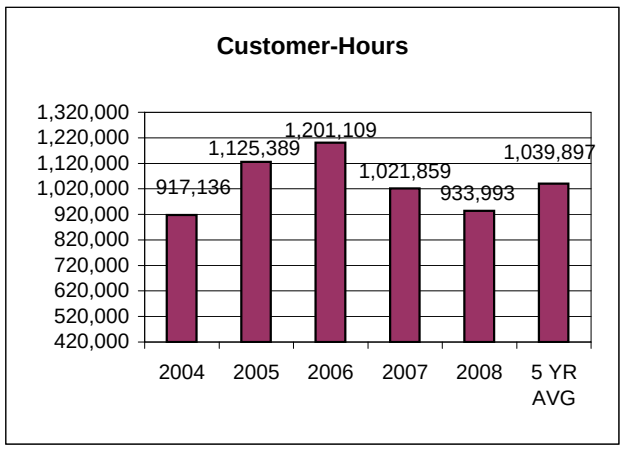
Central Hudson Gas and Electric
(Excluding Major Storms)

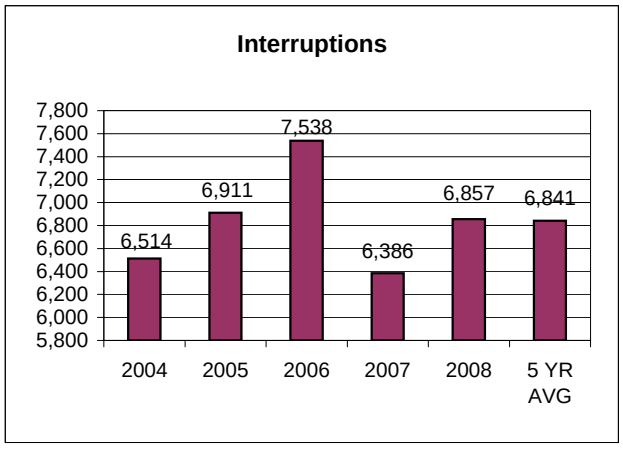




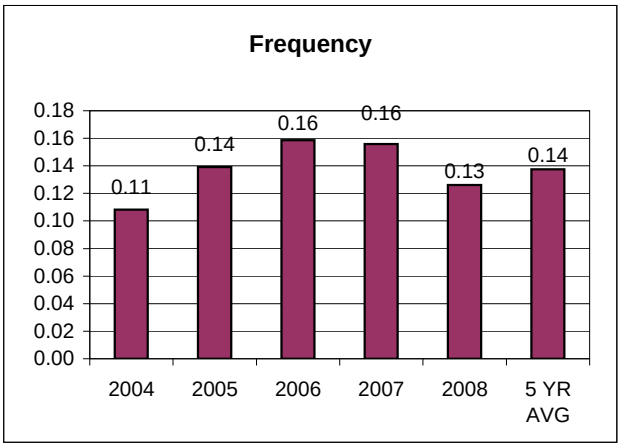


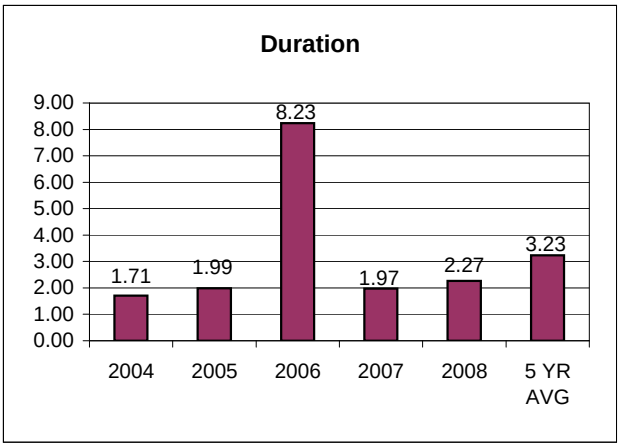


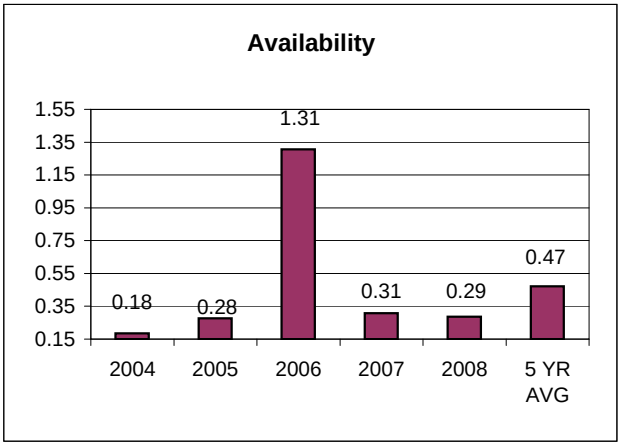


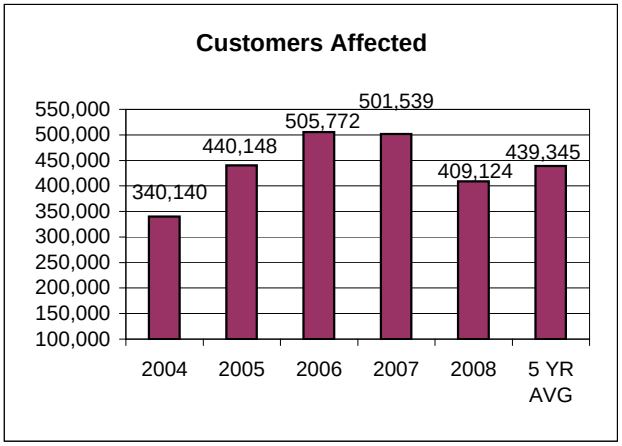


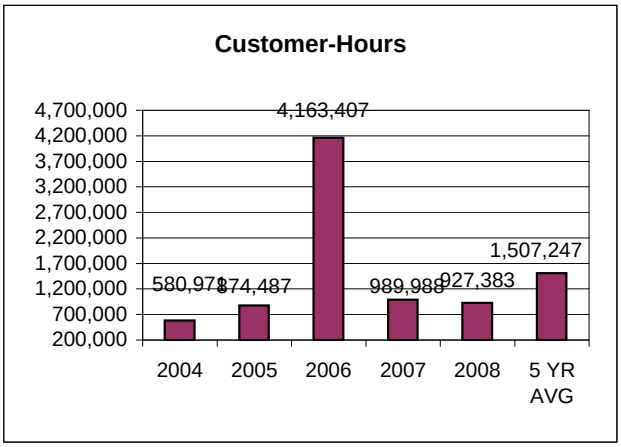
Consolidated Edison - System
(Excluding Major Storms)

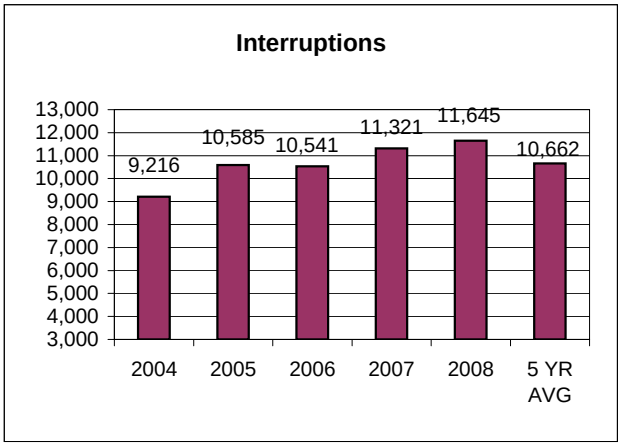




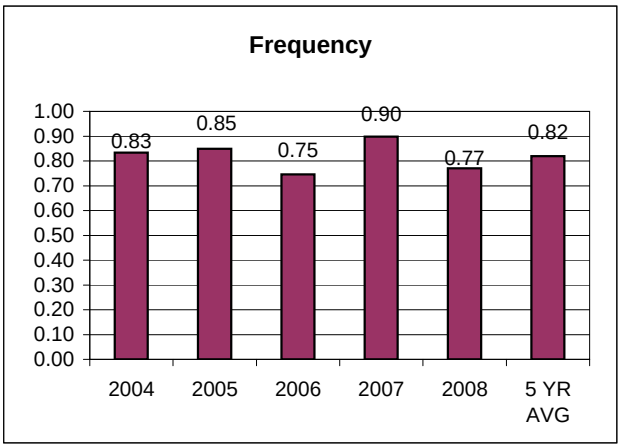


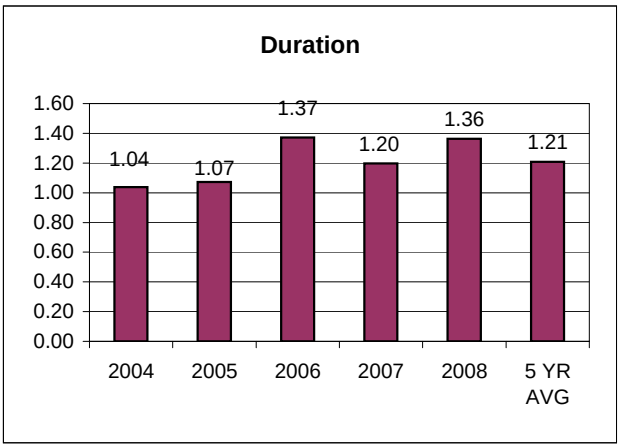


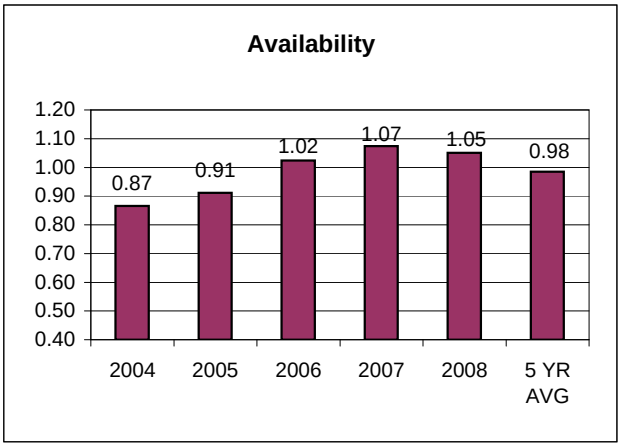


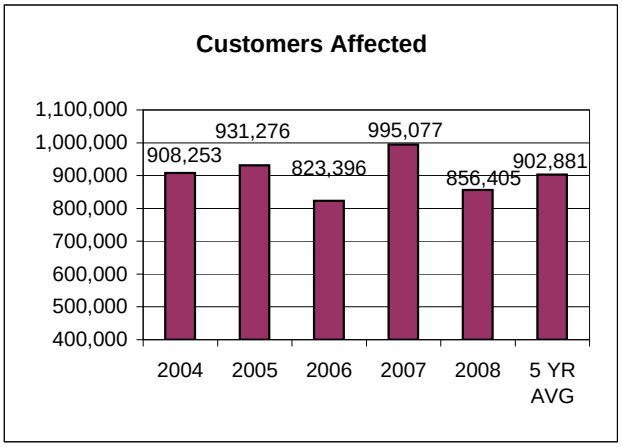


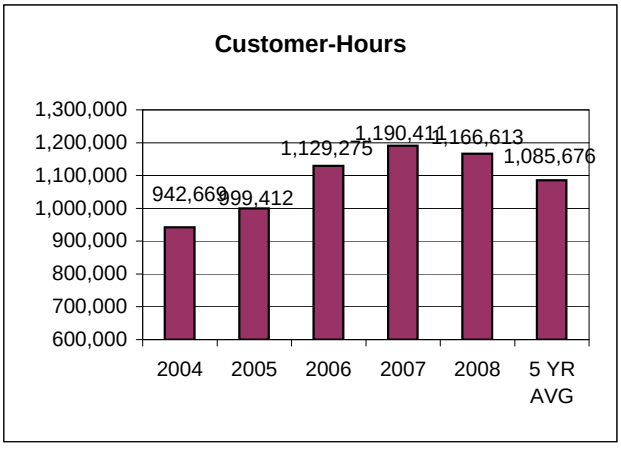
Long Island Power Authority
(Excluding Major Storms)

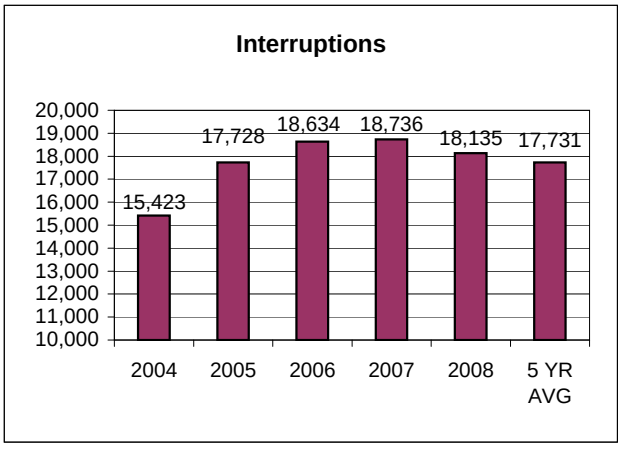








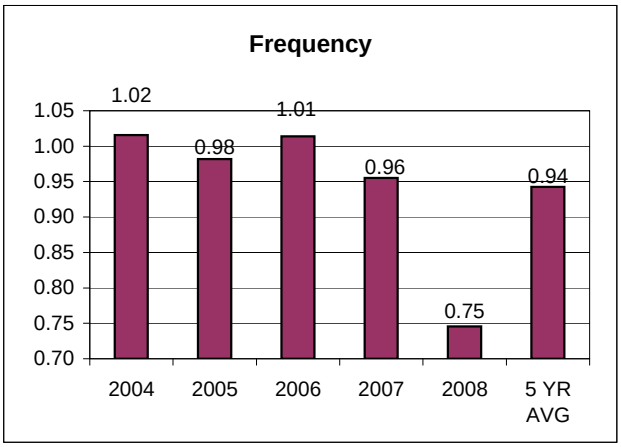


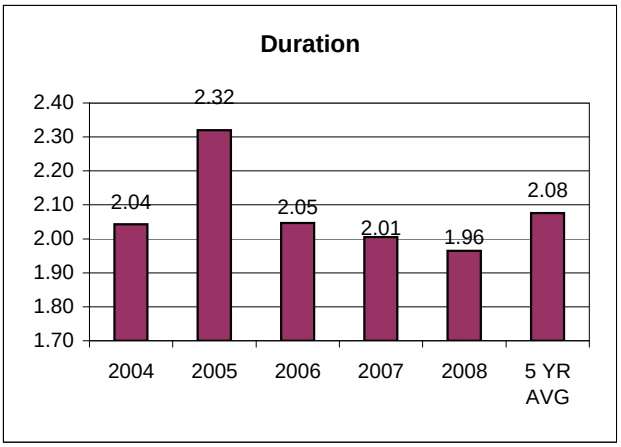


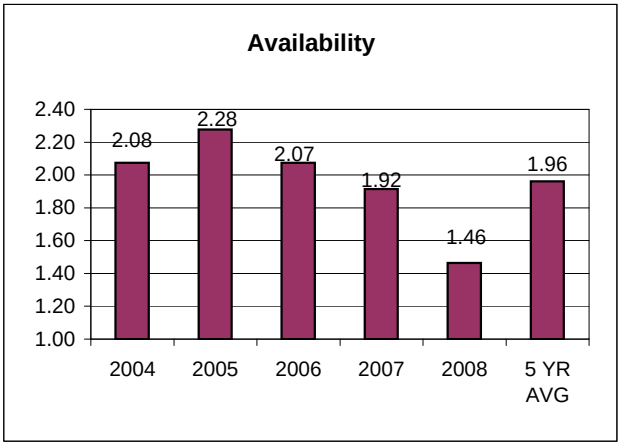
* LIPA is not regulated by the NYS PSC.

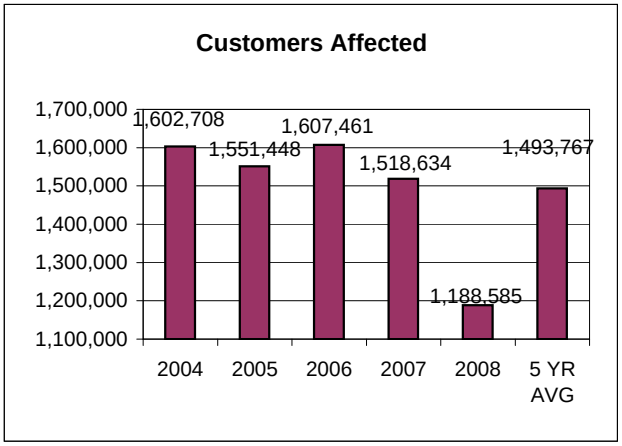
June, 2009

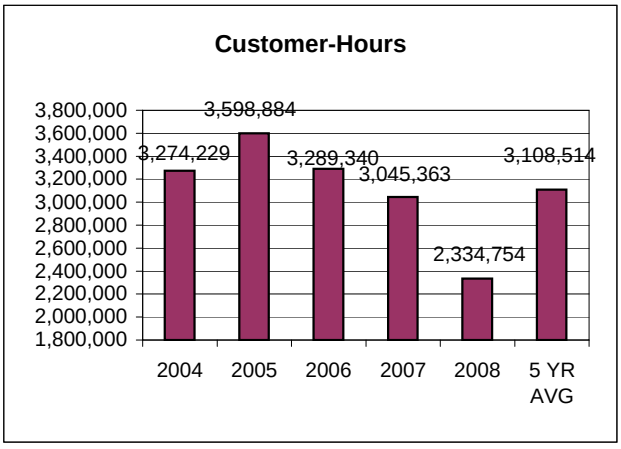
National Grid
(Excluding Major Storms)

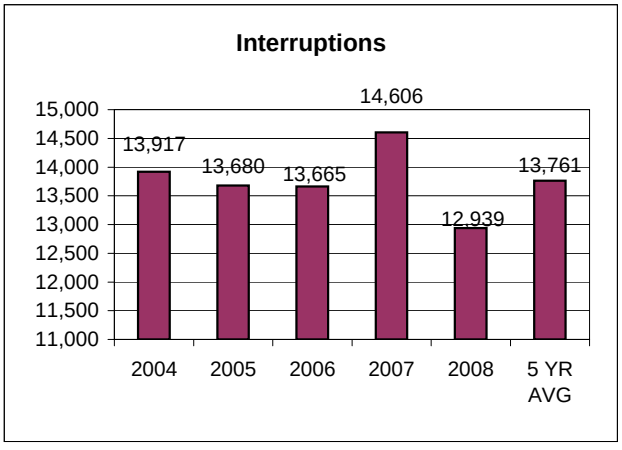




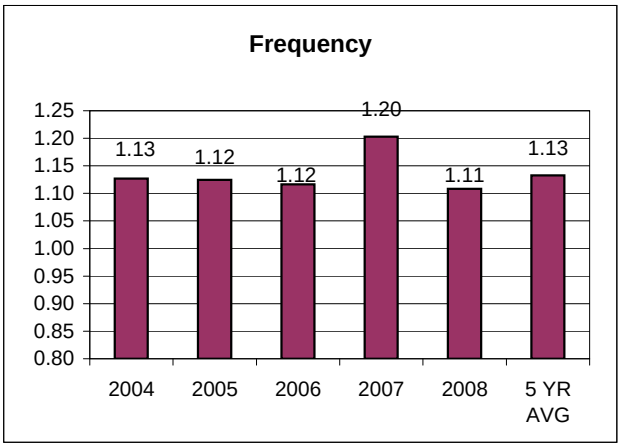


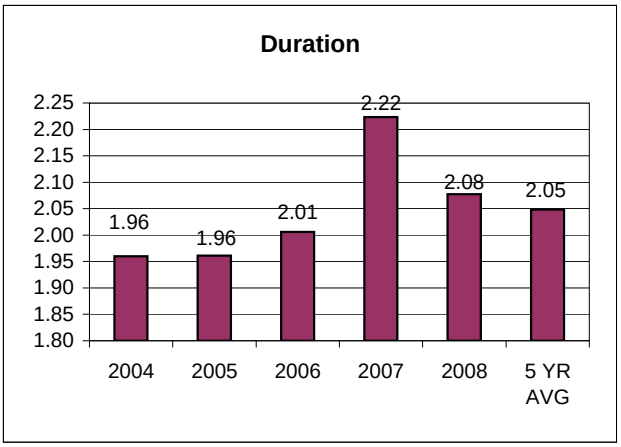


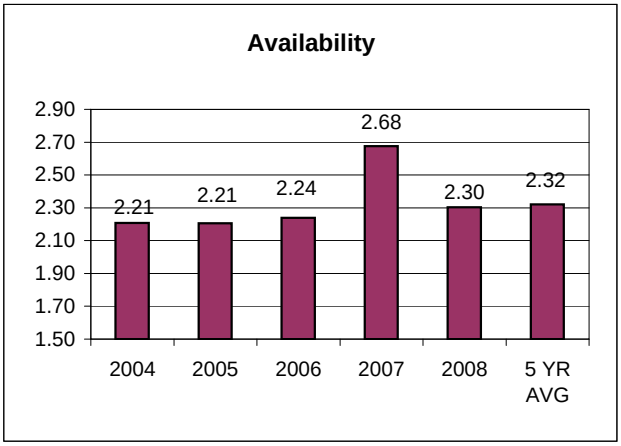


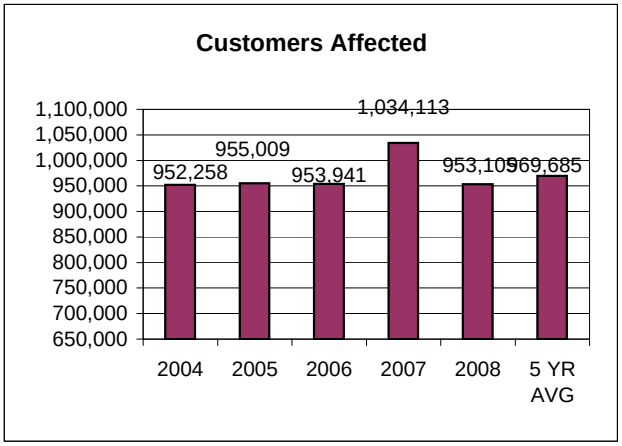


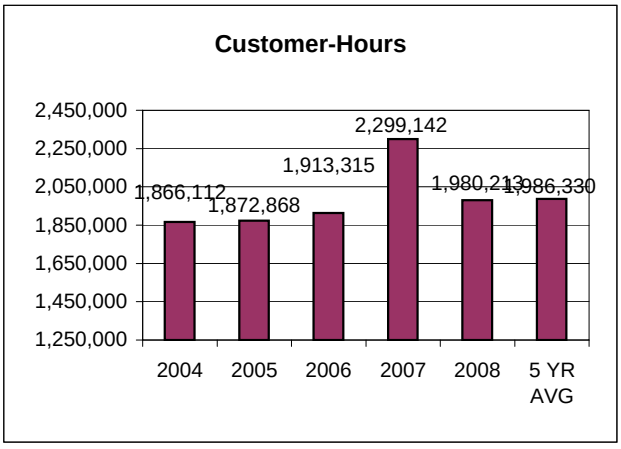
New York State Electric and Gas
(Excluding Major Storms)

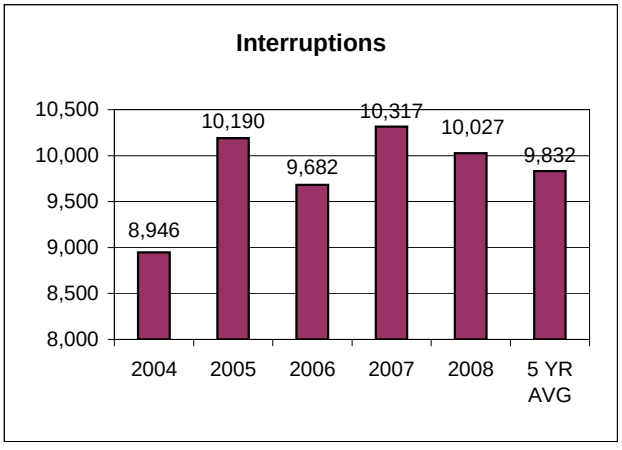




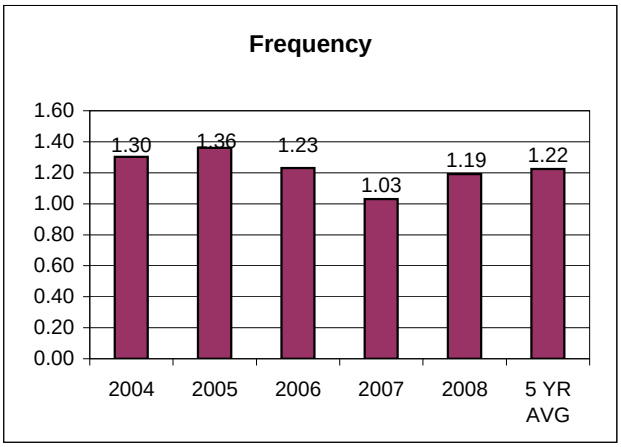


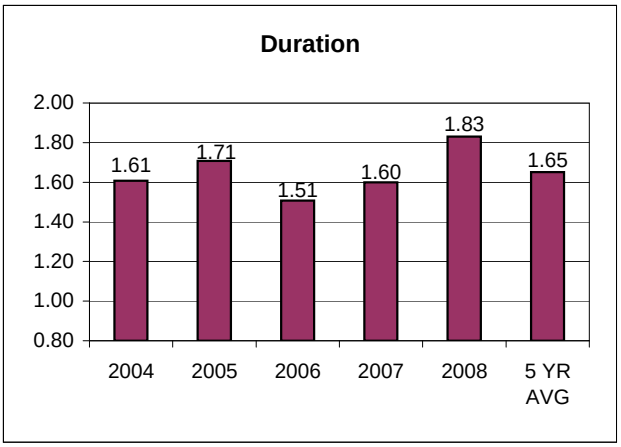


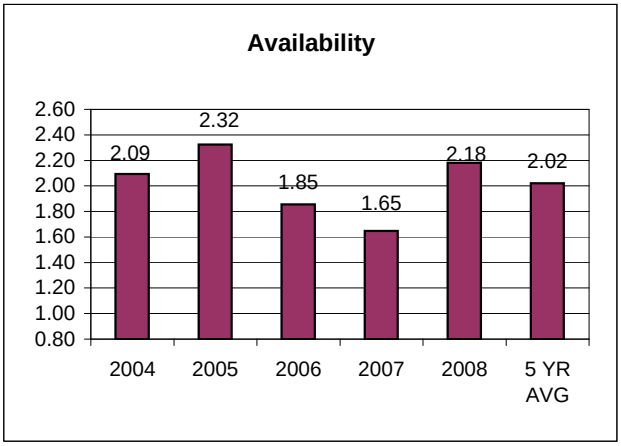


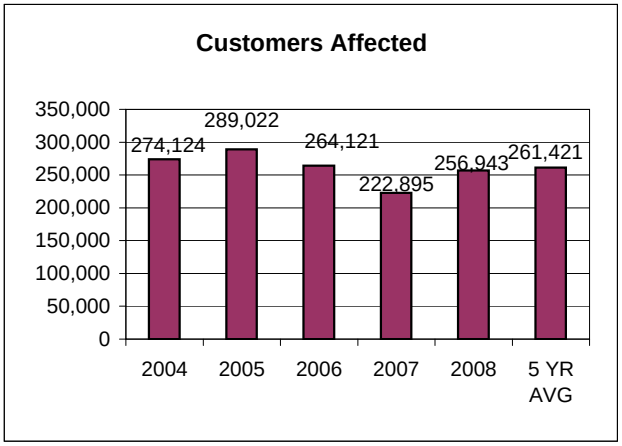


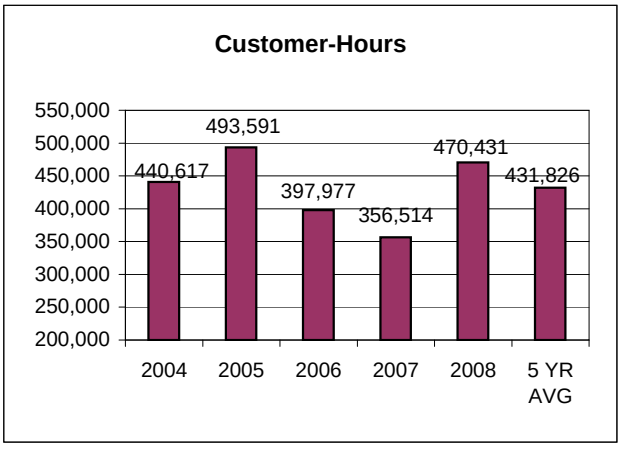
Orange and Rockland Utilities
(Excluding Major Storms)

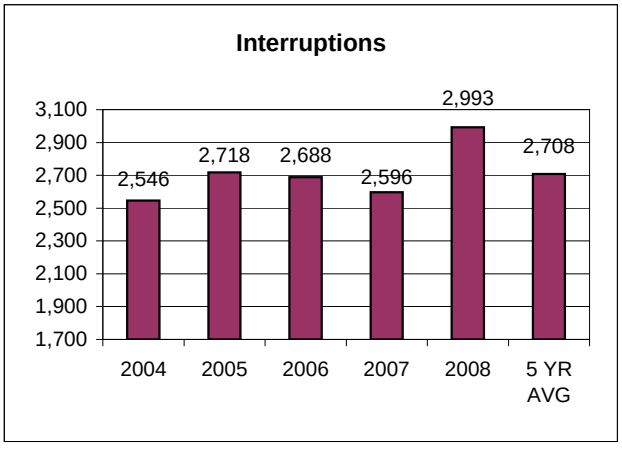




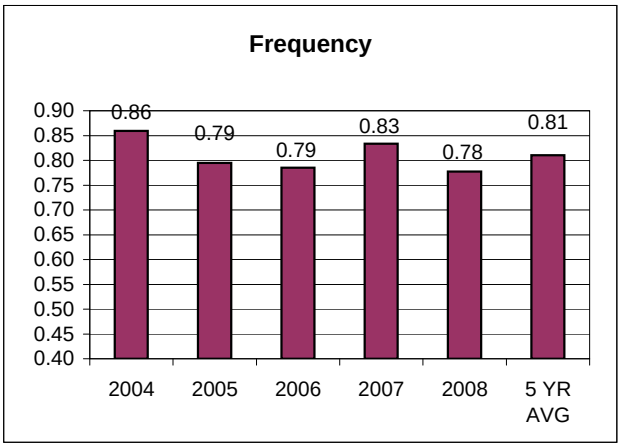


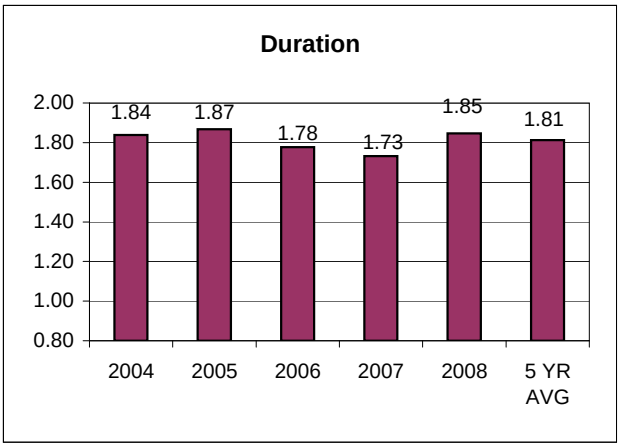


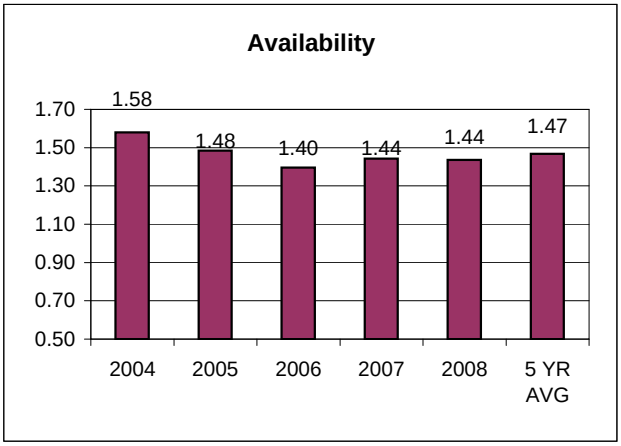


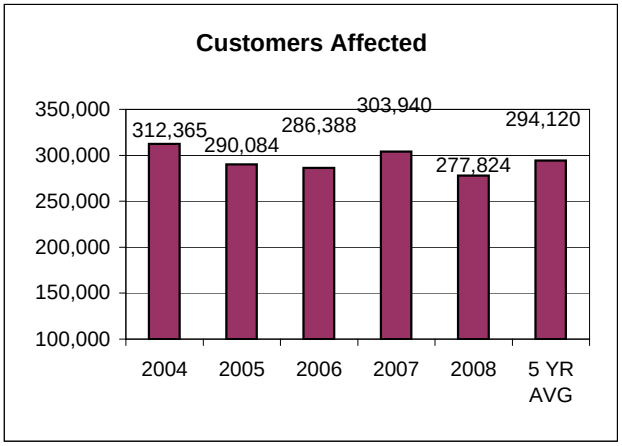


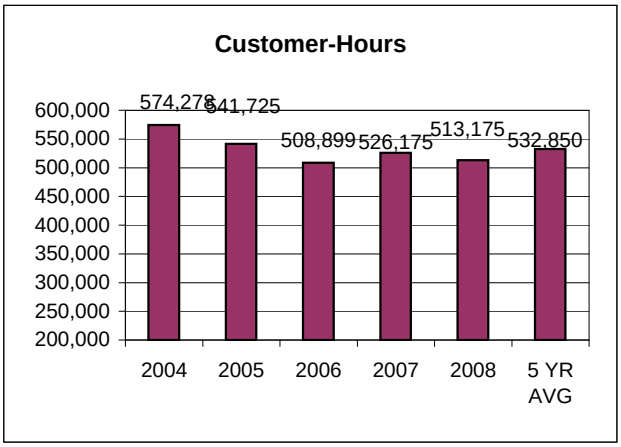
Rochester Gas and Electric
(Excluding Major Storms)

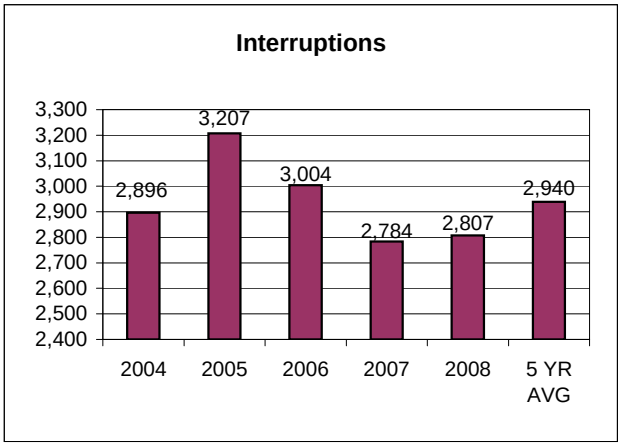








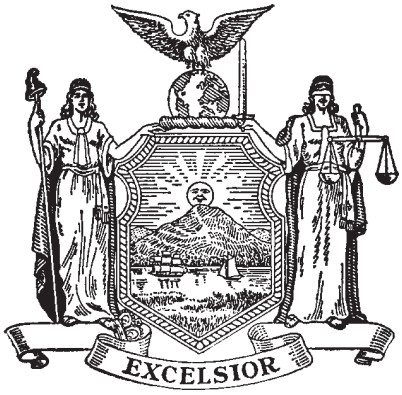




Filed Session of June 16, 2011

STATE OF NEW YORK

DEPARTMENT OF PUBLIC SERVICE



2010 ELECTRIC RELIABILITY PERFORMANCE REPORT

Electric Distribution Systems

Office of Electric, Gas, and Water

June 2011

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EXECUTIVE SUMMARY

This report presents Department of Public Service Staff's (Staff) assessment of electric reliability performance in New York State for 2010. As a means of monitoring the levels of service, utilities are required to submit detailed monthly interruption data to the Public Service Commission (Commission). Staff primarily relies on two metrics commonly used in the industry to measure reliability performance: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration).[1] Frequency is influenced by factors such as system design, capital investment, maintenance, and weather.[2] Decisions made by utilities today on capital expenditures and maintenance policies, however, can take several years before being fully reflected in the frequency measure. Duration, on the other hand, is affected by work force levels, management of the workforce, and geography. By compiling the interruption data provided by the individual utilities, the average frequency and duration of interruptions can be reviewed to assess the overall reliability of electric service in New York State. Recent data is also compared with historic performances to identify positive or negative trends. Finally, Staff reviews several other specific metrics that vary by utility to gauge electric reliability.

The statewide interruption frequency for 2010, excluding major storms, has been nearly identical for the past three years, and better than the five year average. Central Hudson Gas and Electric Corporation (Central Hudson) and Niagara Mohawk Power Corporation d/b/a National Grid's (National Grid) improved when compared with 2009. While the performances of the remaining four of the major electric companies were not as good as 2009 levels, they still performed satisfactorily and met the criteria in the performance mechanisms to which they were subject. For these companies, calendar year 2009 was also one of their best performing years in recent history.

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[1] SAIFI is the average number of times that a customer is interrupted during a year. CAIDI is the average interruption duration time for those customers that experience an interruption during the year.

[2] To help achieve a balance between service interruptions under a utility's control, such as equipment failures, and those which a utility's control is more limited, such as an ice storm, we review reliability data both including and excluding severe weather events.

For the most part, duration performances were acceptable. Although, the statewide duration in 2010 was slightly worse than 2009, it was better than the five year average. In 2010, New York State Electric and Gas (NYSEG)'s and Rochester Gas and Electric (RG&E)'s duration was its best performance in the past five years.

Calendar year 2010 was historically one of the worst with respect to major storm effects. Three significant storms in the Hudson Valley and Downstate contributed to the entire State having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years.

With respect to individual utility performance in 2010, Consolidated Edison Company of New York's (Con Edison) generally performed satisfactorily. Due to concerns regarding the accuracy of the number of customers that were affected by an interruption in a network, we are now measuring network performance using two alternate measures: the number of interruptions per 1000 customers[3] and the average interruption duration. In 2010, Con Edison's network interruption performance was better than its 2009 performance, however, the Company's network interruption duration was worse in 2010 when compared to its 2009 performance. With regard to its radial system, Con Edison's radial system interruption frequency was nearly the same as its five year average. The radial system interruption duration performance declined compared to prior years, but was better than the five year average.

While NYSEG and RG&E had worse frequency performances in 2010 as compared with 2009, they are still much better than the Companies' respective performance targets. Outages associated with tree contacts and equipment failures continue to be a concern relative to NYSEG. In 2010, the companies have resumed investing in and maintaining their systems at more appropriate levels after low spending levels in 2009. As previously stated, the companies achieved their best duration performances of the past five years in 2010.

[3] An interruption is the loss of service for five minutes or more, for one or more customers. For example, a blown fuse that affects twelve customers is one interruption.

National Grid continues to perform well. The Company's recent infrastructure improvement and reliability focused programs are having a positive impact. Central Hudson's performance was better or consistent with its five year averages. Because of continuing tree issues, Central Hudson implemented a more rigorous tree trimming specification several years ago. Staff will perform field reviews of electric lines that are at or near the end of the first four-year trimming cycle. Orange and Rockland Utilities, Inc. (Orange and Rockland) performed satisfactorily with regard to interruption frequency, but not with respect to interruption duration. The Company has lacked consistency in its performances and Staff will be working with the Company to help reduce this variability.

All investor-owned electric utilities have reliability performance mechanisms (RPMs) in place as part of their rate plans. The RPMs are designed such that companies are subject to negative revenue adjustments for failing to meet electric reliability targets. In 2010, Con Edison achieved the network outage duration metric and the remote monitoring system metric in its RPM only if the exclusions it is asserting are accepted by the Commission. Failure to achieve the performance levels set forth in these metrics may result in negative revenue adjustments of $5 million and $10 million, respectively. Con Edison is seeking exclusion of storm related outages and extraordinary circumstances in its Long Island City network, as permitted under certain circumstances in its RPM. If the exclusion is allowed, this would result in the Company meeting all RPM targets.[4] Orange and Rockland failed to achieve its interruption duration target in 2010, which would result in a negative revenue adjustment of $800,000. On March 16, 2011, Orange and Rockland filed a request for exemption for outages experienced during a storm on July 19, 2010. The request, if granted, improves the duration performance such that the Company would meet its target and not be subject to any negative revenue adjustments.[5] All of the other companies met their RPM targets.

[4] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

[5] Orange and Rockland's request for exemption has yet to be presented to the Commission for final action.

Overall, we are generally pleased with the steady electric reliability performance across the State. There are, however, individual concerns that are being addressed through various Staff efforts. This report will be transmitted to an executive level operating officer of each electric utility with a letter from the Director of the Office of Electric, Gas, and Water.

INTRODUCTION

This report provides an overview of the electric reliability performance in New York State. As a means of monitoring the levels of service reliability, the Commission's Rules and Regulations require utilities delivering electricity in New York State to collect and submit information to the Commission regarding electric service interruptions on a monthly basis.[6] The utilities provide interruption data that enables Staff to calculate two primary performance metrics: the System Average Interruption Frequency Index (SAIFI or frequency) and the Customer Average Interruption Duration Index (CAIDI or duration). The information is grouped into 10 categories that delineate the nature of the cause of interruption (cause code).[7] Analysis of the cause code data enables the utilities and Staff to identify areas where increased capital investment or maintenance is needed. As an example, if a circuit were shown to be prone to lightning-caused interruptions, arrestors could be installed on that circuit to try to minimize the effect of future lightning strikes. In general, most of a utility's interruptions are a result of major storms, tree contacts, equipment failures, and accidents.[8] Staff maintains the interruption information in a database that dates back to 1989, which enables it to observe trends.

The Commission also adopted electric service standards addressing the reliability of electric service. The standards contain minimum acceptable performance levels for both the frequency and duration of service interruptions for each major electric utility's operating divisions. The utilities are required to submit a formal reliability report by March 31 of each year containing detailed assessments of performance, including outage trends in a utility's various geographic regions, reliability improvement projects, and analyses of worst-performing feeders. There are no revenue adjustments for failure

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[6] 16 NYCRR Part 97, Notification of Interruption of Service requires utilities to keep detailed back-up data for six years.

[7] 16 NYCRR Part 97, Notification of Interruption of Service specifies and defines the following ten cause codes that reflect the nature of the interruptions: major storms, tree contacts, overloads, operating errors, equipment failures, accidents, prearranged interruptions, customers equipment, lightning, and unknown. There are an additional seven cause codes used exclusively for Con Edison's underground network system.

[8] The accident cause code covers events not entirely within in the utilities' control including vehicular accidents, sabotage, and animal contacts. Lightning is reported under a separate cause code.

to meet a minimum level under the service standards; utilities are, however, required to include a corrective action plan as part of the annual report. The service standards were last revised in 2004.

In addition, utility performance is compared with utilities' RPMs established as part of the utilities' rate orders. RPMs are designed such that companies are subjected to negative revenue adjustments for failing to meet electric reliability targets. The RPMs typically include targets for frequency and duration; some RPMs have additional measures to address specific concerns within an individual company.

2010 RELIABILITY PERFORMANCE

The following sections provide a summary discussion of the reliability performance statewide and for each of the major utilities.[9] Interruption data is presented in two ways in this report – with major storms excluded and with major storms included. A major storm is defined by the Commission's regulations as any storm which causes service interruptions of at least 10 percent of customers in an operating area, and/or interruptions with duration of 24 hours or more. Major storm interruptions are excluded from the data used in calculating performance levels for service standards and reliability performance mechanisms. The purpose of this policy is to achieve a balance between service interruptions under a utility's control, such as equipment failures and line maintenance, and those over which a utility's control is more limited, such as severe ice storm or a heavy wet snowstorm. Reliability performance data inclusive of major storms reflects the actual customer experience during a year.

Each year, Staff prepares an Interruption Report summarizing the monthly interruption data submitted by utilities. The 2010 Interruption Report contains detailed interruption data for each utility and statewide statistics for the past five years. The Interruption Report for 2010 is attached as an Appendix. Individual company discussions identify issues or actions within each company that influenced performance levels for 2010 and indicate company-specific trends where applicable.

Revenue adjustments for inadequate performance are implemented through individual RPMs which have been established in the utilities' rate orders.[10] Con Edison and Orange and Rockland failed to achieve targets in their reliability performance mechanisms for 2010. Con Edison failed to achieve the average interruption duration target for its network system and also failed its Remote Monitoring System target, resulting in a negative rate adjustment of $15 million. Orange and Rockland failed to achieve its interruption duration target, which results in a negative revenue adjustment of $800,000. The rate adjustments are preliminary assessments because both companies are

[9] Although LIPA is not regulated by the Commission, it supplies interruption data that is used to calculate statewide performance in this report.

[10] Revenue adjustments for inferior performances are implemented through individual Reliability Performance Mechanisms established in rate orders.

requesting exemptions, which are permitted under certain circumstances, and with which the companies would meet their targets and avoid any negative revenue adjustments.[11]

STATEWIDE

For many years, Staff has been combining individual utility performance statistics into overall statewide statistics. By doing so Staff is able to evaluate the level of reliability provided statewide and identify statewide trends. Because Con Edison's system includes many large, highly concentrated distribution networks that are generally less prone to interruptions than overhead systems, its interruption frequency is extremely low (i.e., better) as compared with other utilities. This, combined with the fact that it serves the largest number of customers in the state, typically results in a skewing of the performance measures. As a result, Staff examines and presents aggregated data both including and excluding Con Edison's data.

Statewide, as may be seen in Figure 1, the frequency of interruptions excluding major storms was 0.57 in 2010; this is generally equivalent to the previous two years' performances and better than the five-year average. National Grid and Central Hudson had fewer customers affected by power outages in 2010 when major storms are excluded, while NYSEG, Con Edison, RG&E, and O&R had more customers affected. The frequency performance in 2010 for utilities other than Con Edison is 0.89, which is substantially the same as their frequency performance of 0.88 in 2008 and .090 in 2009, and better than the five-year average of 0.94.

[11] The requests have not been presented to the Commission for final action.

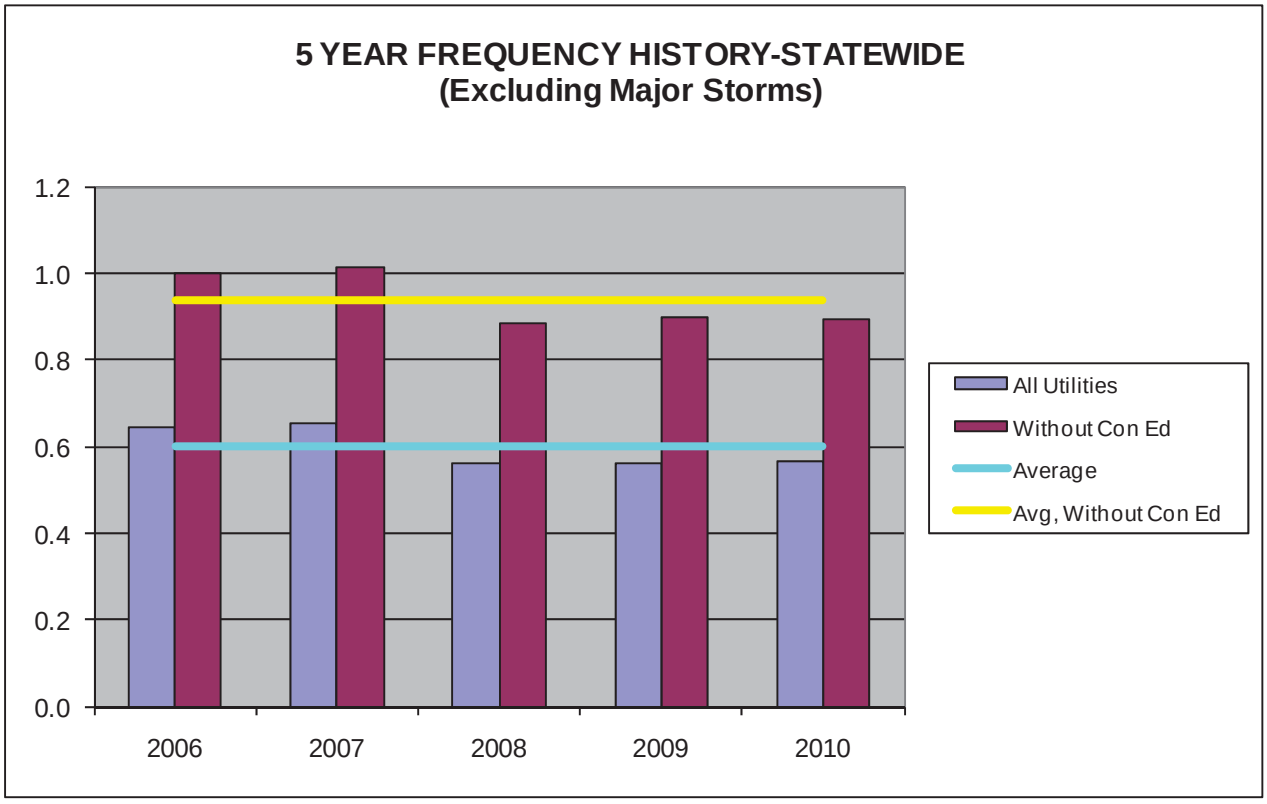


Figure 1: Statewide Frequency Performance

Figure 2 shows the historical statewide interruption duration index, excluding major storms. The 2010 overall statewide interruption duration index of 1.89 is slightly worse than 2009's 1.83, but is still consistent with the history of the past four years. When examining the chart, it should be kept in mind that Con Edison's Long Island City network outages in 2006 are still in the five year average. The statewide interruption duration index, excluding Con Edison, was 1.82 hours in 2010, which is the second best of the past five years.

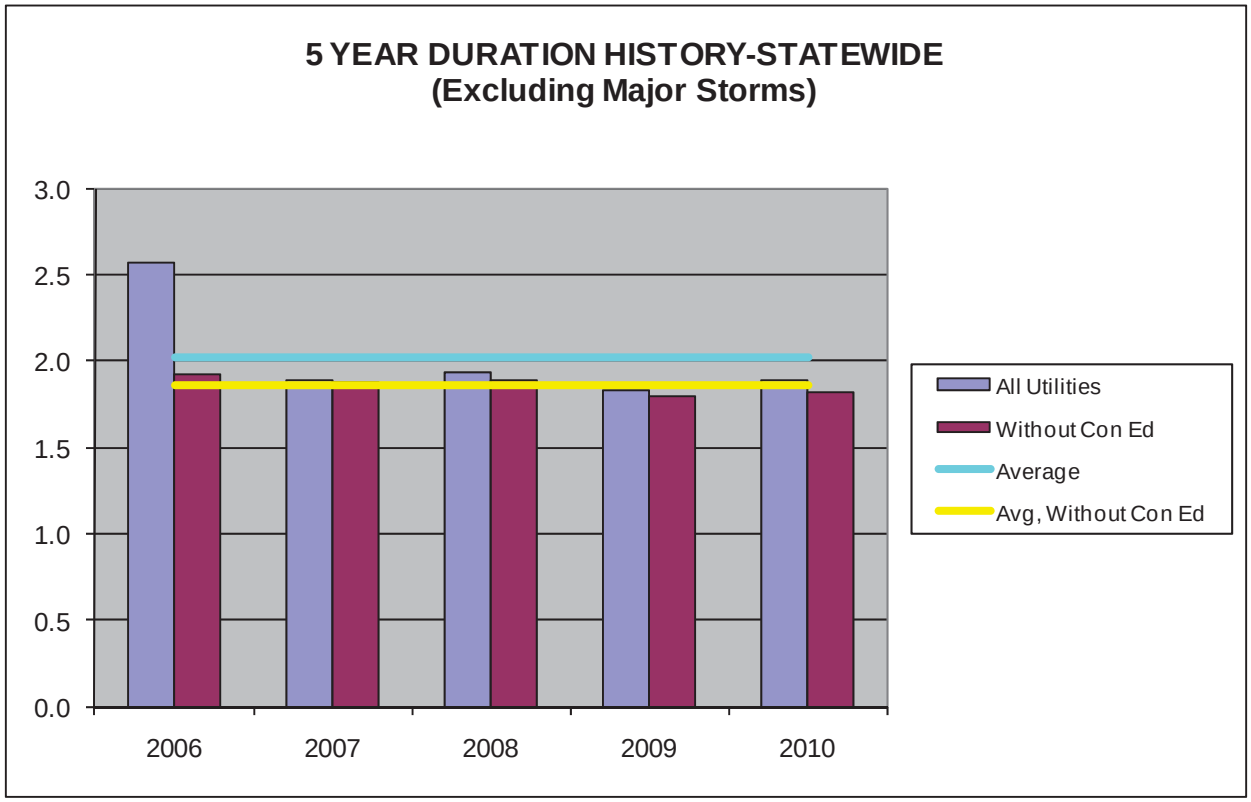


Figure 2: Statewide Duration Performance

While the overall number of major storms in 2010 was not atypical, three significant storms occurred in the Hudson Valley and Downstate. The three storms, summarized below, contributed to 2010 having the fifth-most hours of customer electric service interruption (including major storms) in the past twenty years (Figures 3 and 4, below). Because of the extended restoration times associated with these storms, the Commission requires the companies to file storm reports detailing restoration activities. [12] These reports were reviewed during the course of the year and determined that, in general, the utilities responded well.

- On February 23rd and 25th, heavy wet snow hit the Hudson Valley causing 300,000 customers to lose power. Central Hudson, Con Edison, NYSEG, and O&R were affected with overall restoration time exceeding a week. For Central Hudson, it was the worst storm in Company history since 1991, causing twice as much hours of customer interruption as Hurricane Floyd in 1999.

[12] 16 NYCRR Part 97, Part 105.4, requires utilities to file storm reports for outages lasting longer than three days.

- A March nor'easter swept the downstate area on March 3rd and affected 475,000 customers. Companies primarily affected were Con Edison, O&R, and LIPA. For Con Edison, it was the largest storm with respect to customer hours of interruption in Company history, with more than three times the amount experienced in Tropical Storm Ernesto in 2006.

- On September 16th, Tornados/Macrobursts hit downstate and affected Con Edison, O&R and LIPA, causing Con Edison 31,000 customers, mostly in Staten Island, Brooklyn and Queens, to lose power, some for extended times. The storms, while narrow in this geography, were notable in the magnitude of their destructiveness.

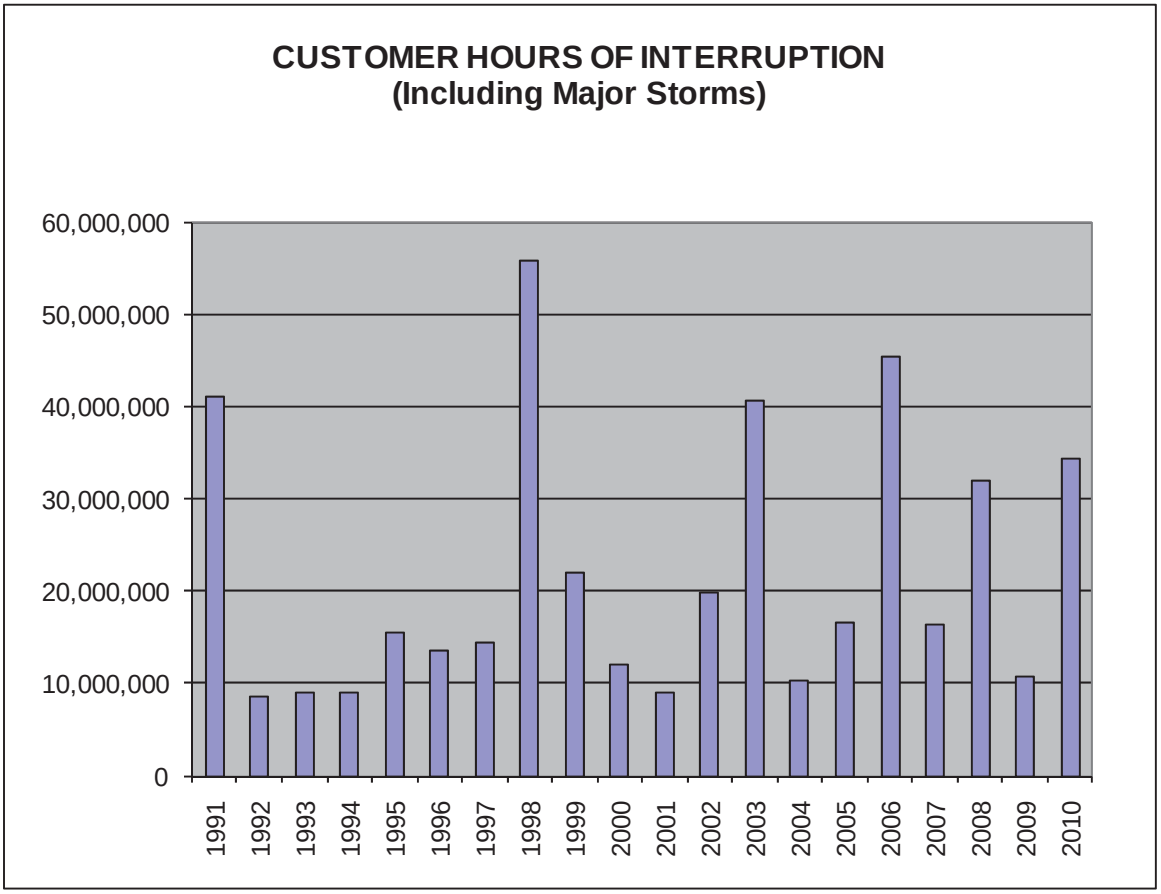


Figure 3: Customer Hours of Interruption (Including Major Storms)

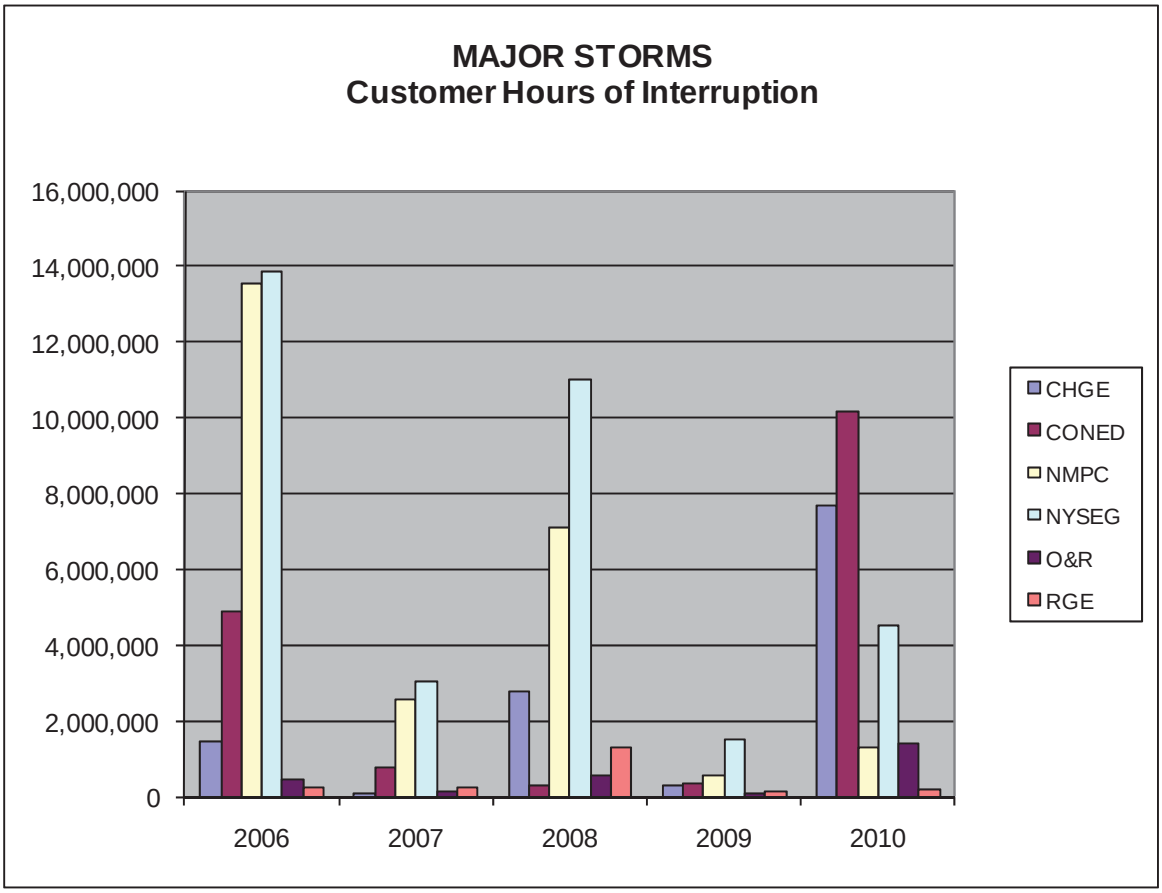


Figure 4: Major Storm Customer Hours

CON EDISON

Table 1: Con Edison's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Network Systems[13]						
Frequency				3.63	3.09	---
Duration				4.63	5.89	---
Radial System						
Frequency (SAIFI)	**0.54**	0.38	0.42	0.32	0.41	0.42
Duration (CAIDI)	**2.66**	**2.07**	1.83	1.74	1.95	2.05

Note: Data presented in red represents a failure to meet the RPM target for a given year.

[13] The duration and frequency metrics to measure network performance were replaced for 2009 with other measures.

Con Edison serves approximately 3.3 million customers in New York City and Westchester County. Electricity is supplied to 2.4 million customers using network systems. The remaining 900,000 customers are supplied by radial systems.

To minimize the frequency of customer outages, Con Edison's networks are designed with redundant supply paths. Individual service lines to customer premises, however, lack any supplemental supply. Given these design characteristics and underground settings, the majority of interruptions (78%) are associated with the service portion of the network system, as shown in Figure 5. Equipment failures (8%) are the next highest causes for interruptions in 2010 followed by Mains (7%).

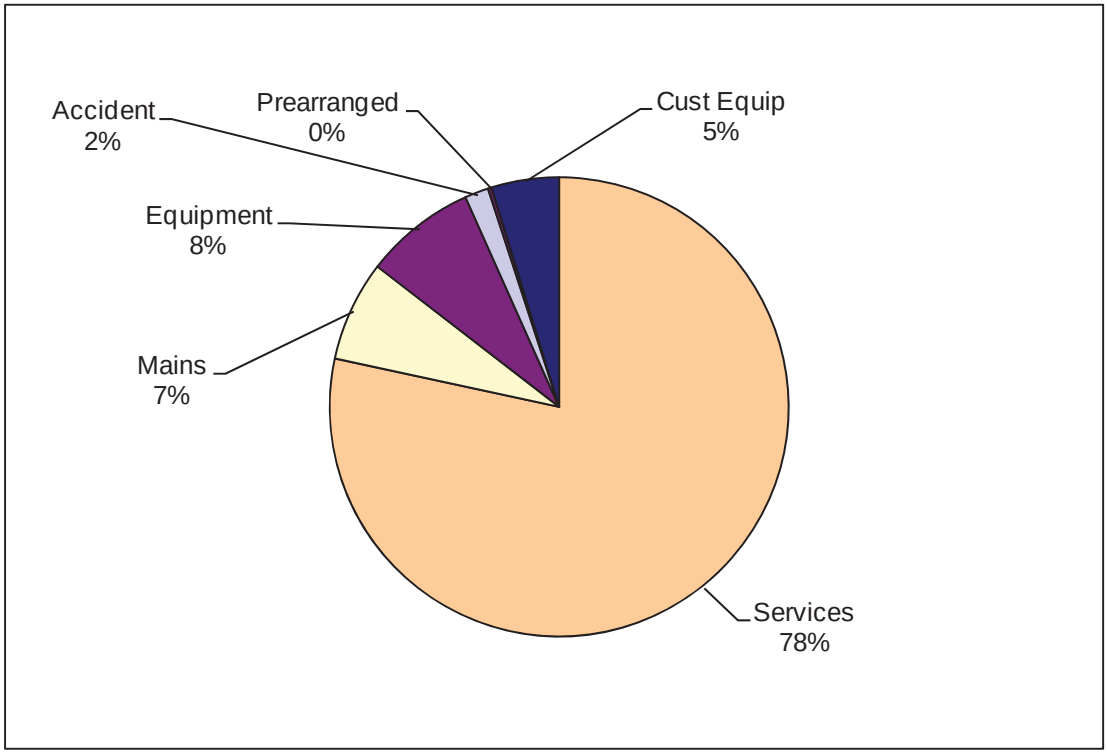


Figure 5: Con Edison's 2010 Network Interruptions by Cause

Due to concerns regarding the accuracy of the number of customers affected by an interruption in a network, we are now measuring network performance using two measures: the number of interruptions per 1000 customers and the average interruption duration. By using measures that are not based on the number of customers affected, we are able to monitor and trend network reliability performances without questioning the validity of the measures. In 2010, Con Edison's network interruptions

metric was better than its 2009 performance. The Company also achieved its RPM network interruption target for the past two years. With regard to duration, Con Edison performed worse in 2010 when compared to its 2009 performance. The Company did not meet its RPM target for average interruption duration in 2010. Con Edison is seeking exclusion of storm related outages from its interruption performance levels. It also failed to achieve the remote monitoring system metric in its RPM, but is seeking an exclusion due to extraordinary circumstances with regard to the Remote Monitoring System (RMS) criteria for its Long Island City network. If these exclusions are granted, the Company would meet the targets and not incur any negative revenue adjustment. [14]

On its radial system, Con Edison's frequency in 2010 of 0.41 was worse than 2009's performances and nearly equal to its five year average. The Company met its RPM frequency target of 0.495 for 2010. Equipment failures are responsible for 75% of the interruptions on the radial system, followed by trees and accidents at 9% and 8%, respectively, as shown in Figure 6.

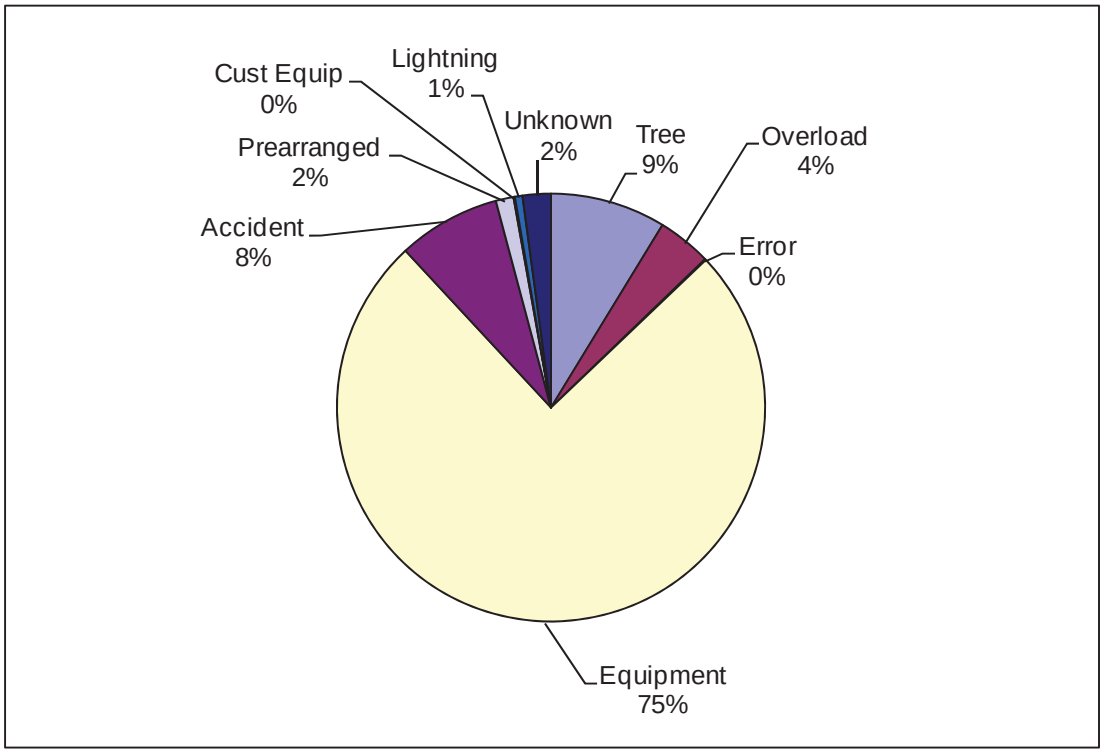


Figure 6: Con Edison's 2010 Radial Interruptions by Cause

[14] Con Edison filed a request for exemption on March 31, 2010 which has yet to be presented to the Commission for final action.

With respect to duration, Con Edison's radial performance in 2010 was worse than the previous two years. While the Company passed its RPM target of 2.04, duration performance is something we and the Company are monitoring closely. In response to a self-assessment recommended by Staff, Con Edison developed and implemented duration improvement strategies for both its radial and network system. To improve crewing efficiency and reduce outage duration, the Company has increased use of first responder staffing, increased the ability to mobile dispatch work to crews, and improve training resources. Con Edison stated that enhancements have been made to the process utilized for its outage management system to flag large outage jobs, and it now employs an automatic call out process for additional crews. The Company also continues to improve the reliability of its system by installing switches and other rapid restoration technologies. Given the focus and efforts Con Edison has put into place regarding duration, we believe 2010's performance is acceptable.

NATIONAL GRID

Table 2: National Grid's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.01**	**0.96**	0.75	0.88	0.80	0.88
Duration (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98

Note: Data presented in red represents a failure to meet the RPM target for a given year.

National Grid serves approximately 1.59 million customers across upstate New York. The Company's 25,000 square mile territory includes metropolitan areas, such as the cities of Buffalo, Albany, and Syracuse, as well as many rural areas in northern New York and the Adirondacks.

In 2010, National Grid achieved both its reliability targets, comprising three consecutive years of positive performance. The Company's frequency level of 0.80 in 2010 improved as compared with 0.88 in 2009, and is well below its frequency target level of 0.93. The duration performance for 2010 was worse than 2009, but equal to its historic five-year average, and better than its duration target of 2.07 for five consecutive

years. National Grid also provided consistent service on a region by region basis. In 2010, the Company's Northeast division failed to achieve its duration expectation and the Capital Region barely missed its frequency expectation. As previously discussed, the divisional expectations are defined by our Electric Service Standards.

Historically, equipment failures were National Grid's leading cause of interruptions. Aged equipment, leading to poor frequency performances in mid 2000 necessitated the Company's significant investment in capital improvement projects aimed at improving reliability. As a result of the upgrades and modifications to its distribution system, the percentage of interruptions caused by equipment failures is now less than tree related electric service interruptions for 2010 (see Figure 7, below). It should be noted, however, that tree-related outages were worse in 2009 and 2010 when compared to historic interruption rates. Analysis of the data indicates that the increase in tree related interruptions is attributable to increased broken limb conditions. Interruptions caused by re-growth and danger trees, however, were both lower in 2010 than in 2009. As a result, National Grid is not recommending changes to its five year trimming cycle or hazard tree removal program. To help reduce it tree-related outages, National Grid is doing additional off-cycle trimming and trimming on worst performing circuits in 2011.

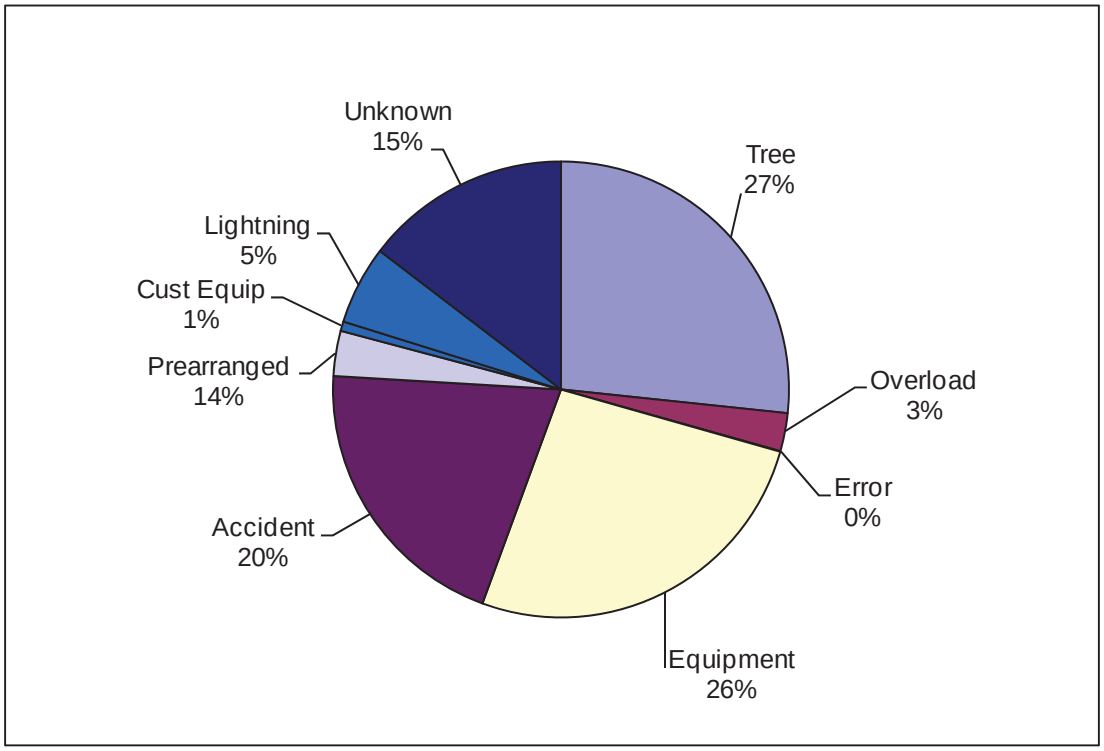


Figure 7: National Grid's 2010 Interruptions by Cause

In addition to improved performance on equipment failures, National Grid has decreased the number of customers affected when a failure occurs (see Table 3). The average number of customers affected by an interruption has been reduced from over 100 customers per interruption to approximately 90 customers per interruption in each of the last three years. National Grid credits the reduction to its effort to sectionalize lines via recloser and side tap fuse installations. National Grid's Line Recloser Program installs 100 additional reclosers per year and is expected to continue to limit the number of customers affected by a single interruption.

Table 3: National Grid's Historic Customers Affected per Interruption

	2006	2007	2008	2009	2010
Average number of customers affected per interruption	118	104	92	87	92

National Grid now uses a system that establishes repair work orders in direct response to inspection findings. Based on its success in repairing deteriorated items under its inspection and maintenance, National Grid will be discontinuing focused programs, such as the Pole Replacement Program and Feeder Hardening Program in 2011. While these programs were helpful in reducing National Grid's frequency performance over the past years, it is appropriate for the Company to consolidate its efforts in the interest of prioritizing and scheduling efficiencies. We expect that National Grid will continue to address reliability concerns on worst performing feeders, either through engineering reliability reviews or alternate methods, and maintain at least the current level of performance in future years.

NEW YORK STATE ELECTRIC AND GAS

Table 4: NYSEG's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13
Duration (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06

Approximately 858,269 customers are served by NYSEG. The Company is primarily located in the Binghamton and Finger Lakes regions, but does have localized service regions, including areas near Plattsburgh, Brewster, Mechanicville, and Lancaster.

NYSEG's frequency performance of 1.14 was worse when compared with 2009's performance of 1.08, but nearly the same as the five year average. The 2010 duration performance of 1.98 was the best in the past five years. Overall, NYSEG's performance is satisfactory and the Company was able to meet its RPM reliability targets of 1.20 for frequency and 2.08 for duration.

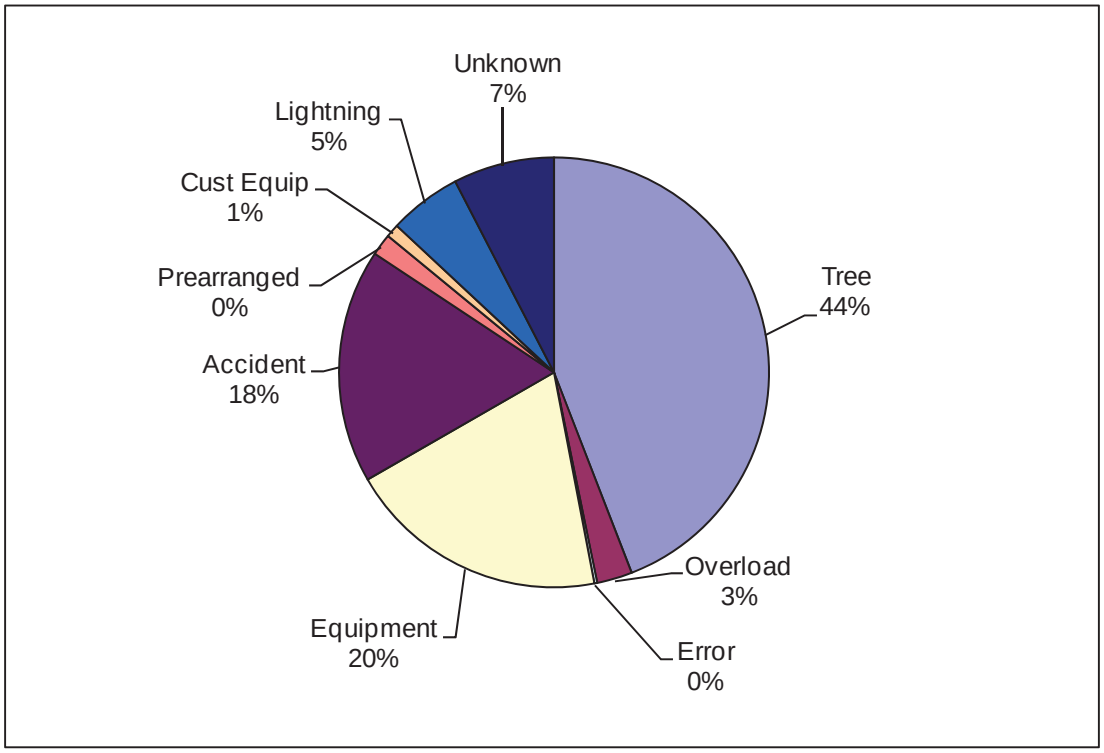


Figure 8: NYSEG's 2010 Interruptions by Cause

As shown in Figure 8, tree contacts (44%), equipment failures (20%), and accidents (18%) remain the predominant causes of interruption throughout NYSEG's twelve operating divisions in 2010. NYSEG has one of the worst frequency rates which is caused primarily by customers affected by tree interruptions. As a result, NYSEG needs to continue to focus on improving its distribution vegetation management program and reducing tree related outages. The Commission approved increased funding for distribution vegetation management activities as part of its last 2010 rate case agreement to help move NYSEG towards full cycle trimming activities. Therefore, Staff expects NYSEG to address the issue of tree trimming more aggressively and undertake measures to identify and perform trimming in areas where tree related outages are more frequent.

Equipment failures are NYSEG's second major cause for interruption. For the past two years, it accounted for 20% of the total number of interruptions. NYSEG has been addressing equipment failures under its Transmission and Distribution Infrastructure Replacement Program (TDIRP) program. The TDIRP program replaces electrical T&D equipment based on the condition, age, and failure characteristics of the specific item based on the Company's experience and knowledge. Funding for the

TDIRP program was reduced significantly in 2009 to approximately $6.0 million from historical levels of approximately $23 million annually.[15] In 2010, NYSEG began to invest in its system at close to or higher than historic levels. The most recent rate case supported $25 million in expenditures for the TDIRP efforts annually, to bring the Company back up to pre 2009 spending levels. The reinvestment into this program is expected to help reduce outages related to equipment failures and improve the system reliability on a going forward and proactive basis. Staff will continue to monitor the Company's performance on these issues.

ROCHESTER GAS AND ELECTRIC

Table 5: RG&E's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74
Duration (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77

RG&E serves approximately 358,109 customers. Although the Company is comprised of four service areas, its Rochester division accounts for approximately 80% of its customer base. As a result, its overall reliability statistics mirror that of the Rochester division.

With regard to service reliability, RG&E continues to be one of the better utilities in the state by continually performing better than its RPM targets of 0.90 for frequency and 1.90 for duration, as established in its rate orders. As shown in Table 5, RG&E's performance for frequency and duration is fairly consistent with its five year average. The Company's frequency performance of 0.71 in 2010 was an increase from 0.59 in 2009; however, the 2009 performance was the best in the past five years. RG&E's duration performance of 1.71 in 2010 was better than in 2009 and better than the five-year average.

[15] In 2009, the Company reduced all expenditures to essential needs only while stating financial issues within the Company as the reasoning behind the reduced spending.

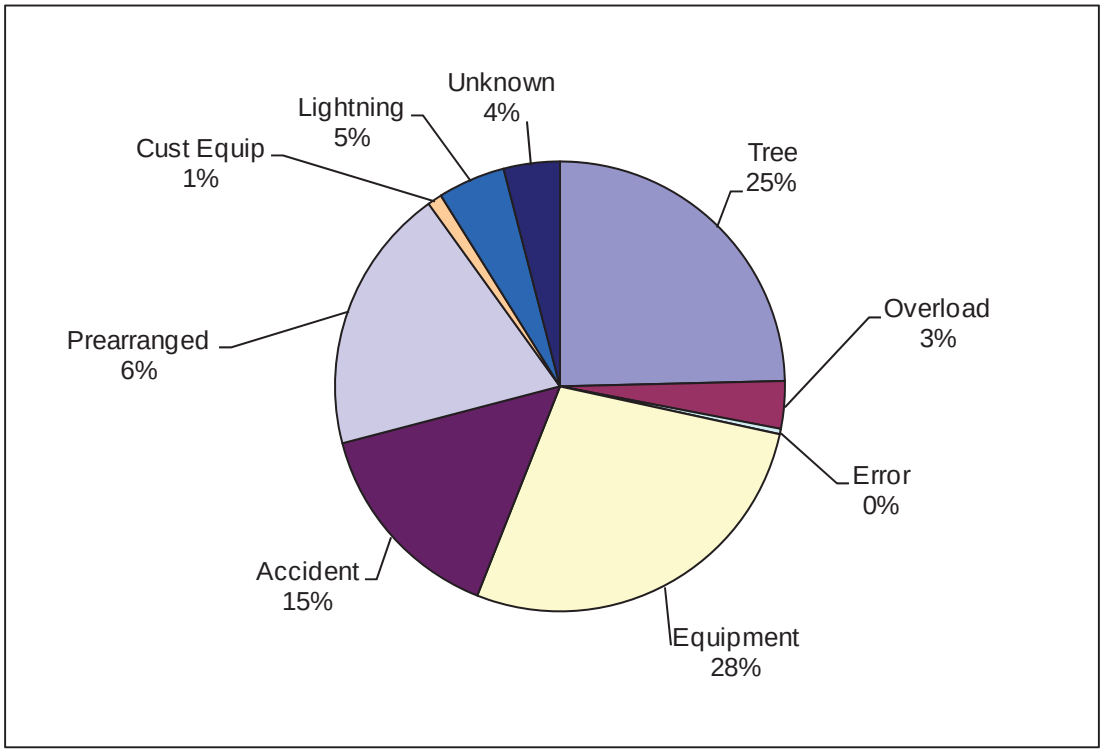


Figure 9: RG&E's 2010 Interruptions by Cause

Figure 9 shows that the two major contributors to interruptions in 2010 continue to be equipment failures (28%) and tree contacts (25%). Similar to NYSEG, funding for RG&E's Transmission and Distribution Infrastructure Replacement Program (TDIRP) was reduced due to Company financial issues in 2009 and the beginning of 2010. In the last rate case, the Commission supported expenditures for the TDIRP efforts, in the amount of $15 million annually, to bring the Company back up to pre 2009 spending levels. Likewise, the Commission also supported increased expenditures for vegetation management, in the amount of $6.6 million annually, allowing the Company to implement a full system vegetation management (tree trimming) cycle program. Staff believes that these two programs and associated expenditures will help reduce outages and improve the system reliability going forward on proactive basis.

CENTRAL HUDSON GAS AND ELECTRIC

Table 6: Central Hudson's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	**1.59**	1.42	1.27	1.37	1.27	1.38
Duration (CAIDI)	**2.58**	2.43	2.47	2.22	2.42	2.43

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Central Hudson serves approximately 298,000 customers in the Mid-Hudson Valley region. The Company's territory is mainly suburban and rural. Central Hudson does serve some urban regions, such as the cities of Poughkeepsie and Newburgh.

Central Hudson's frequency performance of 1.27 in 2010 was better than 2009 and ties its five-year best. The Company's duration performance of 2.42 in 2010, on the other hand, was slightly better than average. Figure 10 shows that 38% of customer interruptions were due to tree related issues, followed by accidents which comprised 25%. In 2010, the Company achieved its RPM targets of 1.45 for frequency and 2.50 for duration.

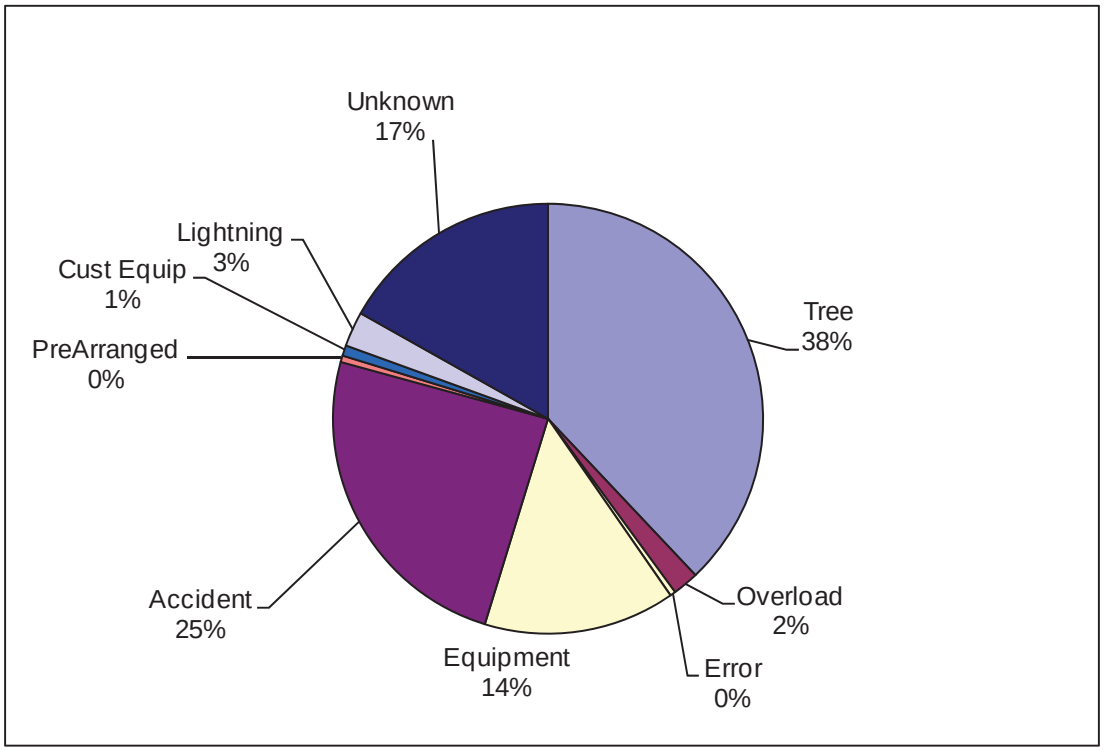


Figure 10: Central Hudson's 2010 Interruptions by Cause

As is the case with most overhead distribution utilities, trees are a primary cause of outages (Figure 10, above). The Company as a whole suffers more tree interruptions per customer served than any other major New York electric utility. Since 2007 Central Hudson has done vegetation line clearance in accordance with a new, improved specification. Using greater level of detail available to it, the Company reports a trend of decreasing interruptions resulting from trees falling inside its trimming zone. Staff will follow-up this summer with the Company and perform field reviews of electric lines that are at or near the end of the four-year trimming cycle.

The Unknown and Accident categories historically make up large portions of electric interruptions for all New York utilities, and this is the case for Central Hudson as well. Staff will be looking more closely with the Company at these classifications of outages to see if the Company's performance can be improved.

Equipment failures cause a large number of electric interruptions as is the case with most electric utility companies. Central Hudson is continuing several programs to decrease the number of these interruptions, including programs for substation breaker replacement, porcelain cutout replacement, 14kV paper and lead cable replacement, automatic load transfer switch installation, and aging recloser replacement (including remote communication). In addition, the Company has a program to upgrade individual circuits.

ORANGE AND ROCKLAND

Table 7: O&R's Historic Performance Excluding Major Storms

Metric	2006	2007	2008	2009	2010	5-Year Average
Frequency (SAIFI)	1.23	1.03	1.19	0.96	1.21	1.13
Duration (CAIDI)	1.51	1.60	**1.83**	1.66	**1.79**	1.68

Note: Data presented in red represents a failure to meet the RPM target for a given year.

Orange and Rockland serves approximately 218,000 customers in three New York counties along the New Jersey and Pennsylvania border. In 2010, the

Company met its reliability performance mechanism target of 1.36 for frequency with a frequency of 1.21; however, it failed to achieve the duration target of 1.70 with a 1.79 performance.[16] As the table above shows, the 2010 frequency and duration performance levels were both much worse than last years and continue ORU's sporadic performance trend from year to year. The 2010 results were worse than the 5 year averages and are similar to those in 2008 when the Company again failed to achieve its duration target. Staff will continue to work with the Company to help reduce the variability in performances.

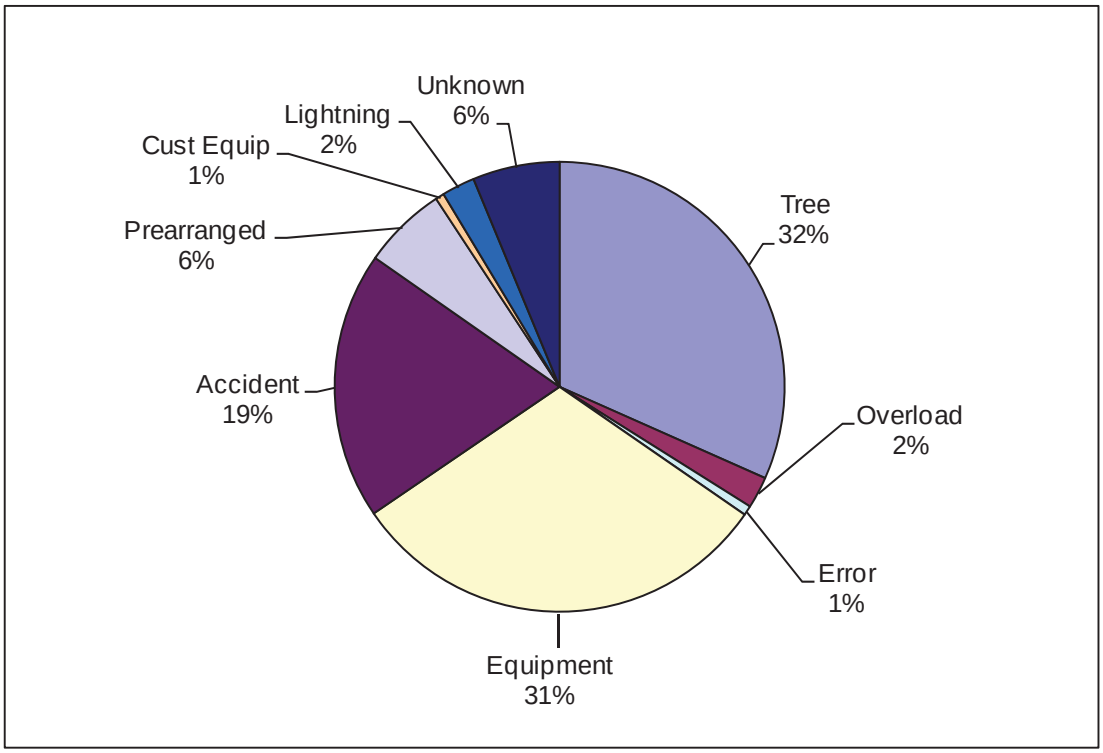


Figure 11: Orange and Rockland's 2010 Interruptions by Cause

As shown in Figure 11, tree contacts (32%) and equipment failures (31%) caused the majority of interruptions in 2010. Orange and Rockland is addressing reliability issues resulting from equipment failures through capital improvement programs such as the Distribution Automation Program, the Underground Cable

[16] The Company has filed a petition to the Commission for exemption from the RPM revenue adjustment, related to a storm that affected its Eastern Division on July 19, 2010. This petition has not been acted on by the Commission.

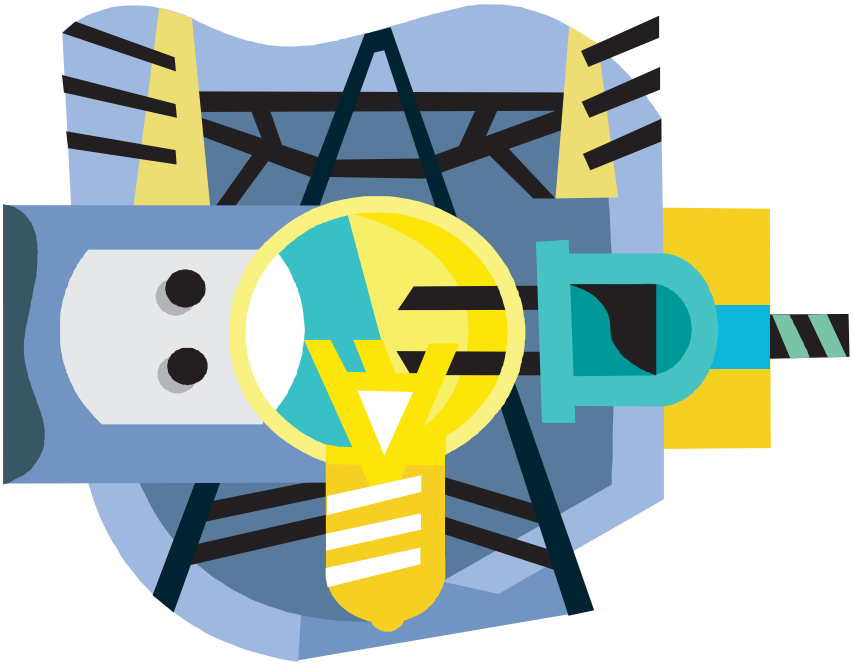
Maintenance and Rebuild Program, and a number of service reliability improvement projects directed by the circuit priority-rating methodology.

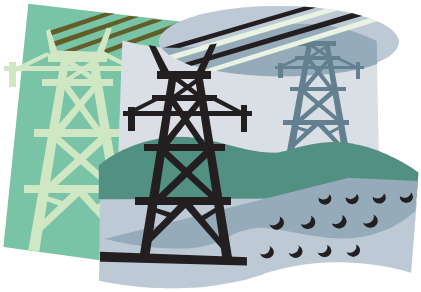
The Company continues to address concerns regarding tree-related outages through increased efforts on its line clearance programs. In addition to the four-year cycle based tree trimming program, the Company has continued to identify and perform supplemental trimming to address areas with recurring tree related outages. These programs are expected to reduce the impact of tree contacts on the Company's electrical system through the coming years.

APPENDIX

2010 INTERRUPTON REPORT

The 2010 Interruption Report





Office of Electricity, Gas, and Water

June 2011

June 2011

ATTACHMENT
Definitions and Explanations of Terms Used in the 2010
Statewide Electric Service Interruption Report

Interruption is the loss of service for five minutes or more.

Customer hours is the time a customer is without electric service.

Customers affected is the number of customers without electric service.

Customers served is the number of customers as of the last day of the **current year.** For example, for the calendar year of **2010**, customers served is the number of customers as of 12/31/2010. For indices using customers served, the **previous** year is used.

Frequency (**SAIFI)** measures the average number of interruptions experienced by customers served by the utility. It is the customers affected divided by the customers served at the end of the **previous** year, i.e., 12/31/2009.

Duration (CAIDI) measures the average time that an affected customer is out of electric service. It is the customer hours divided by the customers affected.

Availability (SAIDI) is the average amount of time a customer is out-of-service during a year. It is the customer hours divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009. Mathematically, it also is **SAIFI** multiplied by **CAIDI**.

Interruptions Per 1000 Customers Served is the number of interruptions divided by the number of customers served at the end of the **previous** year, i.e., 12/31/2009, divided by 1,000.

Major Storm is defined as any storm which causes service interruptions of at least ten percent of customers in an operating area, or if the interruptions last for 24 hours or more.

Operating Area is a geographical subdivision of each electric utility's franchise territory. These areas are also called regions, divisions, or districts.

Most of the data is presented two ways, with major storms included and major storms excluded. Major storms tend to distort a utility's performance trend. Tables and graphs that exclude major storms illustrate interruptions that are more under the utility's control. It portrays a utility's system facilities under normal conditions, although this can be misleading because interruptions during "normal" bad weather are included and it is difficult to analyze from year to year.

The first two tables show frequency and duration indices for the last five years for each utility and Statewide with and without Con Edison data. Con Edison has by far the lowest frequency numbers and tends to distort the Statewide data. Much of Con Edison's distribution system consists of a secondary network. In a secondary network, a customer is fed from multiple supplies, making the probability of an interruption relatively rare.

COMPARISON OF SERVICE RELIABILITY INDICES
(EXCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	1.59	1.42	1.27	1.37	1.27	1.38
DURATION	2.58	2.43	2.47	2.22	2.42	2.43
CONED						
FREQUENCY	0.16	0.16	0.13	0.10	0.13	0.13
DURATION	8.23	1.97	2.27	2.27	2.57	3.46
LIPA *						
FREQUENCY	0.75	0.90	0.77	0.74	0.73	0.78
DURATION	1.37	1.20	1.36	1.17	1.11	1.24
NAT GRID						
FREQUENCY	1.01	0.96	0.75	0.88	0.80	0.88
DURATION	2.05	2.01	1.96	1.91	1.98	1.98
NYSEG						
FREQUENCY	1.12	1.20	1.11	1.08	1.14	1.13
DURATION	2.01	2.22	2.08	2.00	1.98	2.06
O&R						
FREQUENCY	1.23	1.03	1.19	1.03	1.21	1.14
DURATION	1.51	1.60	1.83	1.67	1.79	1.68
RG&E						
FREQUENCY	0.79	0.83	0.78	0.59	0.71	0.74
DURATION	1.78	1.73	1.85	1.80	1.71	1.77
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.00	1.02	0.88	0.90	0.89	0.94
DURATION	1.92	1.88	1.89	1.79	1.82	1.86
STATEWIDE (WITH CONED)						
FREQUENCY	0.65	0.65	0.56	0.56	0.57	0.60
DURATION	2.57	1.89	1.93	1.83	1.89	2.02

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

COMPARISON OF SERVICE RELIABILITY INDICES
(INCLUDING MAJOR STORMS)

	2006	2007	2008	2009	2010	5 YR AVG
CHGE						
FREQUENCY	2.20	1.51	2.15	1.63	2.62	2.02
DURATION	4.12	2.51	5.76	2.48	10.94	5.16
CONED						
FREQUENCY	0.23	0.18	0.14	0.11	0.23	0.18
DURATION	12.31	3.12	2.71	3.06	15.05	7.25
LIPA *						
FREQUENCY	1.18	1.04	1.09	0.81	1.04	1.03
DURATION	1.99	1.37	1.65	1.25	1.84	1.62
NAT GRID						
FREQUENCY	1.48	1.31	1.37	1.01	0.98	1.23
DURATION	7.18	2.70	4.32	2.01	2.46	3.74
NYSEG						
FREQUENCY	1.79	1.71	2.14	1.47	1.84	1.79
DURATION	10.32	3.62	7.07	2.68	4.09	5.55
O&R						
FREQUENCY	1.81	1.17	1.64	1.15	1.79	1.51
DURATION	2.15	1.92	2.94	1.89	4.76	2.73
RG&E						
FREQUENCY	0.98	1.16	1.36	0.74	0.79	1.01
DURATION	2.14	1.80	3.77	2.03	2.18	2.38
STATEWIDE (WITHOUT CONED)						
FREQUENCY	1.49	1.31	1.51	1.07	1.29	1.34
DURATION	6.02	2.56	4.62	2.09	4.09	3.87
STATEWIDE (WITH CONED)						
FREQUENCY	0.96	0.83	0.93	0.67	0.84	0.85
DURATION	6.65	2.61	4.50	2.16	5.35	4.25

* LIPA is not regulated by the NYS PSC.

** For those indices that use Customers Served, Customers Served is the December value from the previous year.

STATEWIDE (WITHOUT CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	55,211	55,425	53,758	55,995	54,310	54,940
Number of Customer-Hours	8,439,916	8,439,464	7,399,179	7,116,848	7,197,156	7,718,512
Number of Customers Affected	4,400,072	4,495,428	3,910,426	3,976,492	3,962,829	4,149,049
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	1.92	1.88	1.89	1.79	1.82	1.86
Average Duration Per Customers Served	1.91	1.91	1.67	1.61	1.62	1.74
Interruptions Per 1000 Customers Served	12.52	12.51	12.12	12.65	12.24	12.41
Number of Customers Affected Per Customer Served (SAIFI)	1.00	1.02	0.88	0.90	0.89	0.94

STATEWIDE (WITH CON ED)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	65,752	66,746	65,403	70,930	68,221	67,410
Number of Customer-Hours	12,603,322	9,429,452	8,326,562	7,891,155	8,284,480	9,306,994
Number of Customers Affected	4,905,844	4,996,967	4,319,550	4,316,932	4,385,672	4,584,993
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	2.57	1.89	1.93	1.83	1.89	2.02
Average Duration Per Customers Served	1.66	1.23	1.08	1.03	1.07	1.21
Interruptions Per 1000 Customers Served	8.66	8.73	8.52	9.21	8.83	8.79
Number of Customers Affected Per Customer Served (SAIFI)	0.65	0.65	0.56	0.56	0.57	0.60

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

STATEWIDE (WITHOUT CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	70,872	61,753	73,150	61,841	72,135	67,950
Number of Customer-Hours	39,413,242	14,848,512	30,962,269	9,923,723	23,466,391	23,722,827
Number of Customers Affected	6,548,910	5,808,516	6,705,414	4,752,148	5,741,806	5,911,359
Number of Customers Served	4,428,946	4,433,994	4,425,772	4,437,856	4,446,105	4,434,535
Average Duration Per Customer Affected (CAIDI)	6.02	2.56	4.62	2.09	4.09	3.87
Average Duration Per Customers Served	8.94	3.35	6.98	2.24	5.29	5.36
Interruptions Per 1000 Customers Served	16.08	13.94	16.50	13.97	16.25	15.35
Number of Customers Affected Per Customer Served (SAIFI)	1.49	1.31	1.51	1.07	1.29	1.34

STATEWIDE (WITH CON ED)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	86,734	74,261	85,548	77,181	91,471	83,039
Number of Customer-Hours	48,437,221	16,630,252	32,188,186	11,046,399	34,693,862	28,599,184
Number of Customers Affected	7,282,114	6,379,276	7,158,329	5,118,841	6,487,588	6,485,230
Number of Customers Served	7,647,367	7,678,791	7,697,498	7,729,599	7,766,918	7,704,035
Average Duration Per Customer Affected (CAIDI)	6.65	2.61	4.50	2.16	5.35	4.25
Average Duration Per Customers Served	6.38	2.17	4.19	1.44	4.49	3.73
Interruptions Per 1000 Customers Served	11.42	9.71	11.14	10.03	11.83	10.83
Number of Customers Affected Per Customer Served (SAIFI)	0.96	0.83	0.93	0.67	0.84	0.85

* LIPA is not regulated by the NYS PSC.
** For those indices that use Customers Served, Customers Served is the December

CENTRAL HUDSON
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	7,538	6,386	6,857	6,705	7,762	7,050
Number of Customer-Hours	1,201,109	1,021,859	933,993	910,250	922,392	997,921
Number of Customers Affected	464,765	420,769	377,564	410,516	380,489	410,821
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	2.58	2.43	2.47	2.22	2.42	2.43
Average Duration Per Customers Served	4.10	3.46	3.13	3.03	3.08	3.36
Interruptions Per 1000 Customers Served	25.74	21.62	22.98	22.30	25.91	23.71
Number of Customers Affected Per Customer Served (SAIFI)	1.59	1.42	1.27	1.37	1.27	1.38

CENTRAL HUDSON
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,066	6,681	9,887	7,609	11,994	9,247
Number of Customer-Hours	2,649,690	1,117,802	3,705,277	1,211,827	8,597,567	3,456,433
Number of Customers Affected	643,778	444,813	642,949	488,732	785,806	601,216
Number of Customers Served	295,368	298,386	300,621	299,557	299,971	298,781
Average Duration Per Customer Affected (CAIDI)	4.12	2.51	5.76	2.48	10.94	5.16
Average Duration Per Customers Served	9.05	3.78	12.42	4.03	28.70	11.60
Interruptions Per 1000 Customers Served	34.38	22.62	33.13	25.31	40.04	31.10
Number of Customers Affected Per Customer Served (SAIFI)	2.20	1.51	2.15	1.63	2.62	2.02

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (SYSTEM)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	10,541	11,321	11,645	14,935	13,911	12,471
Number of Customer-Hours	4,163,407	989,988	927,383	774,307	1,087,325	1,588,482
Number of Customers Affected	505,772	501,539	409,124	340,440	422,843	435,944
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	8.23	1.97	2.27	2.27	2.57	3.46
Average Duration Per Customers Served	1.31	0.31	0.29	0.24	0.33	0.49
Interruptions Per 1000 Customers Served	3.31	3.52	3.59	4.56	4.23	3.84
Number of Customers Affected Per Customer Served (SAIFI)	0.16	0.16	0.13	0.10	0.13	0.13

CON ED (SYSTEM)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	15,862	12,508	12,398	15,340	19,336	15,089
Number of Customer-Hours	9,023,979	1,781,740	1,225,917	1,122,677	11,227,471	4,876,357
Number of Customers Affected	733,204	570,760	452,915	366,693	745,782	573,871
Number of Customers Served	3,218,421	3,244,797	3,271,726	3,291,743	3,320,813	3,269,500
Average Duration Per Customer Affected (CAIDI)	12.31	3.12	2.71	3.06	15.05	7.25
Average Duration Per Customers Served	2.83	0.55	0.38	0.34	3.41	1.50
Interruptions Per 1000 Customers Served	4.98	3.89	3.82	4.69	5.87	4.65
Number of Customers Affected Per Customer Served (SAIFI)	0.23	0.18	0.14	0.11	0.23	0.18

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (NETWORK)

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	4,274	5,571	5,485	8,650	7,434	6,283
Number of Customer-Hours	2,947,306	316,477	252,964	273,705	370,405	832,171
Number of Customers Affected	48,467	176,430	40,301	52,994	54,555	74,549
Number of Customers Served	2,363,897	2,361,145	2,385,760	2,403,818	2,439,565	2,390,837
Average Duration Per Customer Affected (CAIDI)	60.81	1.79	6.28	5.16	6.79	16.17
Average Duration Per Customers Served	1.26	0.13	0.11	0.11	0.15	0.35
Interruptions Per 1000 Customers Served	1.83	2.36	2.32	3.63	3.09	2.64
Number of Customers Affected Per Customer Served (SAIFI)	0.021	0.075	0.017	0.022	0.023	0.031

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

CON ED (RADIAL)
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	6,267	5,750	6,160	6,285	6,477	6,188
Number of Customer-Hours	1,216,101	673,511	674,419	500,602	716,920	756,310
Number of Customers Affected	457,305	325,109	368,823	287,446	368,288	361,394
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	2.66	2.07	1.83	1.74	1.95	2.05
Average Duration Per Customers Served	1.43	0.79	0.76	0.57	0.81	0.87
Interruptions Per 1000 Customers Served	7.39	6.73	6.97	7.09	7.29	7.10
Number of Customers Affected Per Customer Served (SAIFI)	0.54	0.38	0.42	0.32	0.41	0.42

CON ED (RADIAL)
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	11,588	6,937	6,913	6,690	11,902	8,806
Number of Customer-Hours	6,076,673	1,465,264	972,954	848,971	10,857,066	4,044,185
Number of Customers Affected	684,737	394,330	412,614	313,699	691,227	499,321
Number of Customers Served	854,524	883,652	885,966	887,925	881,248	878,663
Average Duration Per Customer Affected (CAIDI)	8.87	3.72	2.36	2.71	15.71	6.67
Average Duration Per Customers Served	7.17	1.71	1.10	0.96	12.23	4.63
Interruptions Per 1000 Customers Served	13.67	8.12	7.82	7.55	13.40	10.11
Number of Customers Affected Per Customer Served (SAIFI)	0.81	0.46	0.47	0.35	0.78	0.57

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

LIPA
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	18,634	18,736	18,135	17,795	17,180	18,096
Number of Customer-Hours	1,129,275	1,190,411	1,166,613	958,679	905,031	1,070,002
Number of Customers Affected	823,396	995,077	856,405	821,723	811,969	861,714
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.37	1.20	1.36	1.17	1.11	1.24
Average Duration Per Customers Served	1.03	1.08	1.05	0.86	0.81	0.97
Interruptions Per 1000 Customers Served	16.99	16.98	16.36	16.02	15.41	16.35
Number of Customers Affected Per Customer Served (SAIFI)	0.75	0.90	0.77	0.74	0.73	0.78

LIPA
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	24,905	20,077	20,471	19,003	22,867	21,465
Number of Customer-Hours	2,564,134	1,564,559	1,998,270	1,121,723	2,125,507	1,874,839
Number of Customers Affected	1,289,698	1,142,365	1,208,292	894,595	1,153,884	1,137,767
Number of Customers Served	1,103,162	1,108,540	1,110,853	1,114,716	1,117,281	1,110,910
Average Duration Per Customer Affected (CAIDI)	1.99	1.37	1.65	1.25	1.84	1.62
Average Duration Per Customers Served	2.34	1.42	1.80	1.01	1.91	1.70
Interruptions Per 1000 Customers Served	22.71	18.20	18.47	17.11	20.51	19.40
Number of Customers Affected Per Customer Served (SAIFI)	1.18	1.04	1.09	0.81	1.04	1.03

* LIPA is not regulated by the NYS PSC.
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NATIONAL GRID
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	13,665	14,606	12,939	15,915	13,822	14,189
Number of Customer-Hours	3,289,340	3,045,363	2,334,754	2,645,775	2,529,126	2,768,872
Number of Customers Affected	1,607,461	1,518,634	1,188,585	1,387,131	1,277,727	1,395,908
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	2.05	2.01	1.96	1.91	1.98	1.98
Average Duration Per Customers Served	2.07	1.92	1.46	1.67	1.59	1.74
Interruptions Per 1000 Customers Served	8.62	9.19	8.12	10.05	8.69	8.93
Number of Customers Affected Per Customer Served (SAIFI)	1.01	0.96	0.75	0.88	0.80	0.88

NATIONAL GRID
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	16,279	16,222	18,301	17,060	15,571	16,687
Number of Customer-Hours	16,813,162	5,605,931	9,410,833	3,214,148	3,824,438	7,773,703
Number of Customers Affected	2,341,235	2,075,480	2,177,786	1,599,090	1,553,727	1,949,464
Number of Customers Served	1,589,949	1,594,179	1,583,311	1,589,810	1,593,830	1,590,216
Average Duration Per Customer Affected (CAIDI)	7.18	2.70	4.32	2.01	2.46	3.74
Average Duration Per Customers Served	10.61	3.53	5.90	2.03	2.41	4.89
Interruptions Per 1000 Customers Served	10.27	10.20	11.48	10.77	9.79	10.50
Number of Customers Affected Per Customer Served (SAIFI)	1.48	1.31	1.37	1.01	0.98	1.23

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

NYSEG
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	9,682	10,317	10,027	9,643	9,777	9,889
Number of Customer-Hours	1,913,315	2,299,142	1,980,213	1,848,599	1,934,747	1,995,203
Number of Customers Affected	953,941	1,034,113	953,105	922,448	975,375	967,796
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	2.01	2.22	2.08	2.00	1.98	2.06
Average Duration Per Customers Served	2.24	2.68	2.30	2.16	2.25	2.32
Interruptions Per 1000 Customers Served	11.33	12.00	11.66	11.25	11.39	11.52
Number of Customers Affected Per Customer Served (SAIFI)	1.12	1.20	1.11	1.08	1.14	1.13

NYSEG
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	12,835	12,928	17,008	11,948	14,976	13,939
Number of Customer-Hours	15,787,602	5,314,914	12,974,501	3,369,824	6,445,599	8,778,488
Number of Customers Affected	1,529,247	1,469,825	1,836,251	1,257,464	1,576,105	1,533,778
Number of Customers Served	859,440	859,963	857,517	858,712	856,474	858,421
Average Duration Per Customer Affected (CAIDI)	10.32	3.62	7.07	2.68	4.09	5.55
Average Duration Per Customers Served	18.48	6.18	15.09	3.93	7.51	10.24
Interruptions Per 1000 Customers Served	15.02	15.04	19.78	13.93	17.44	16.24
Number of Customers Affected Per Customer Served (SAIFI)	1.79	1.71	2.14	1.47	1.84	1.79

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

O&R
Excluding Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	2,688	2,596	2,993	2,987	2,897	2,832
Number of Customer-Hours	397,977	356,514	470,431	375,064	472,939	414,585
Number of Customers Affected	264,121	222,895	256,943	223,976	263,752	246,337
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	1.51	1.60	1.83	1.67	1.79	1.68
Average Duration Per Customers Served	1.85	1.65	2.18	1.73	2.17	1.92
Interruptions Per 1000 Customers Served	12.53	12.00	13.88	13.74	13.30	13.09
Number of Customers Affected Per Customer Served (SAIFI)	1.23	1.03	1.19	1.03	1.21	1.14

O&R
Including Major Storms

	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,546	2,738	3,655	3,111	3,646	3,339
Number of Customer-Hours	836,046	483,938	1,043,235	471,941	1,857,491	938,530
Number of Customers Affected	388,164	252,650	354,315	249,064	389,937	326,826
Number of Customers Served	216,268	215,694	217,373	217,884	218,393	217,122
Average Duration Per Customer Affected (CAIDI)	2.15	1.92	2.94	1.89	4.76	2.73
Average Duration Per Customers Served	3.90	2.24	4.84	2.17	8.53	4.33
Interruptions Per 1000 Customers Served	16.53	12.66	16.95	14.31	16.73	15.44
Number of Customers Affected Per Customer Served (SAIFI)	1.81	1.17	1.64	1.15	1.79	1.51

* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

RG&E
Excluding Major Storms

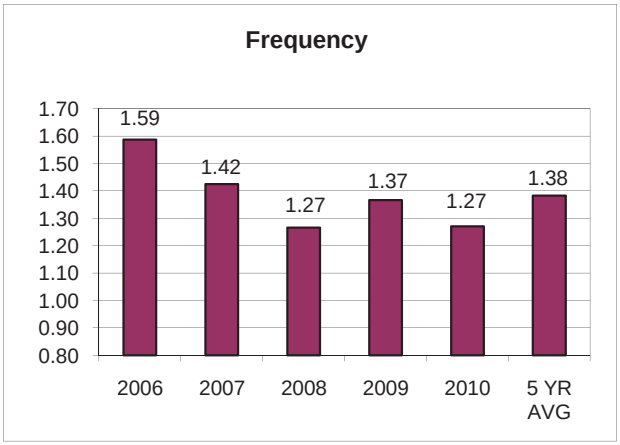
	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,004	2,784	2,807	2,950	2,872	2,883
Number of Customer-Hours	508,899	526,175	513,175	378,481	432,921	471,930
Number of Customers Affected	286,388	303,940	277,824	210,698	253,517	266,473
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	1.78	1.73	1.85	1.80	1.71	1.77
Average Duration Per Customers Served	1.40	1.44	1.44	1.06	1.21	1.31
Interruptions Per 1000 Customers Served	8.24	7.63	7.86	8.28	8.04	8.01
Number of Customers Affected Per Customer Served (SAIFI)	0.79	0.83	0.78	0.59	0.71	0.74

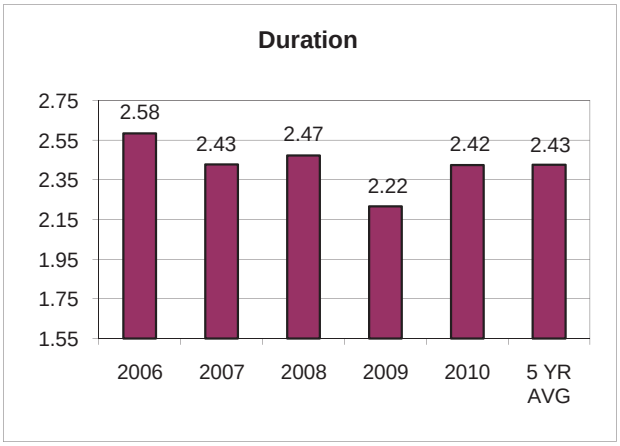
RG&E
Including Major Storms

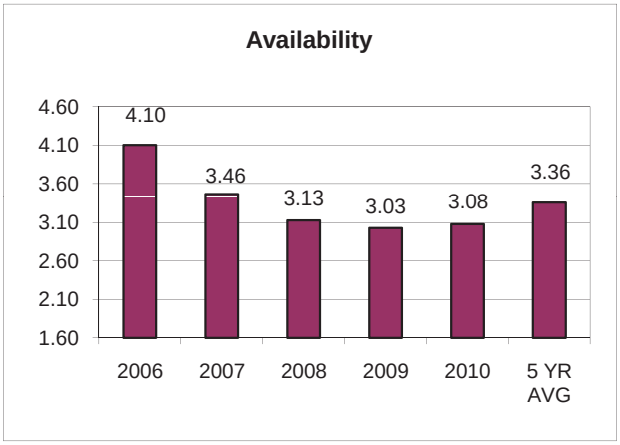
	2006	2007	2008	2009	2010	5 YR AVG
Number of Interruptions	3,241	3,107	3,828	3,110	3,081	3,273
Number of Customer-Hours	762,609	761,368	1,830,153	534,259	615,789	900,835
Number of Customers Affected	356,788	423,383	485,821	263,203	282,347	362,308
Number of Customers Served	364,759	357,232	356,097	357,177	360,156	359,084
Average Duration Per Customer Affected (CAIDI)	2.14	1.80	3.77	2.03	2.18	2.38
Average Duration Per Customers Served	2.09	2.09	5.12	1.50	1.72	2.51
Interruptions Per 1000 Customers Served	8.89	8.52	10.72	8.73	8.63	9.10
Number of Customers Affected Per Customer Served (SAIFI)	0.98	1.16	1.36	0.74	0.79	1.01

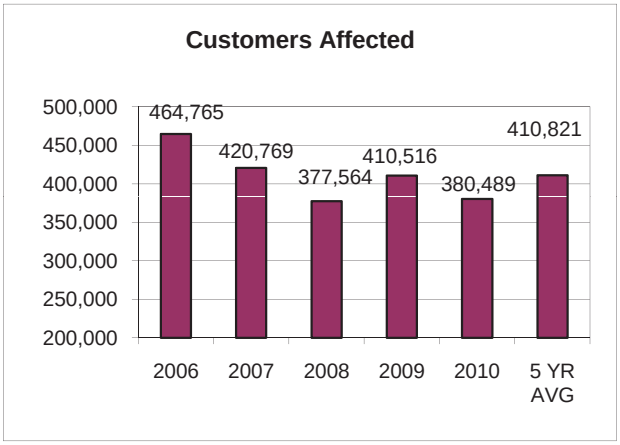
* Customers Served is the number of customers served at the end of the current year.
** For those indices that use Customers Served, Customers Served is the December value from the previous year.

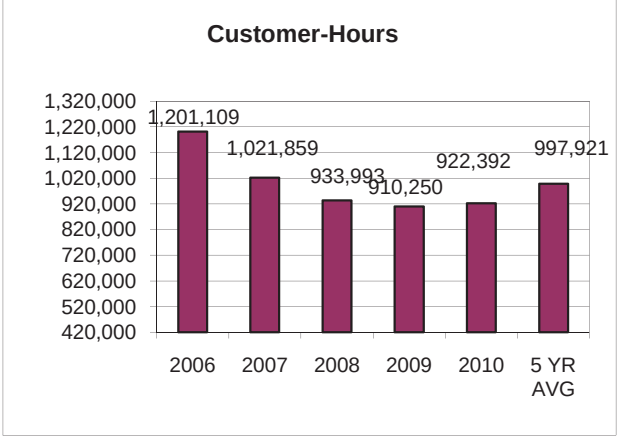
Central Hudson Gas and Electric
(Excluding Major Storms)

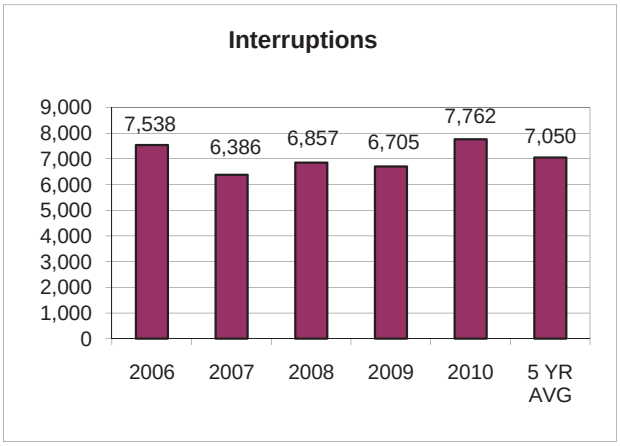




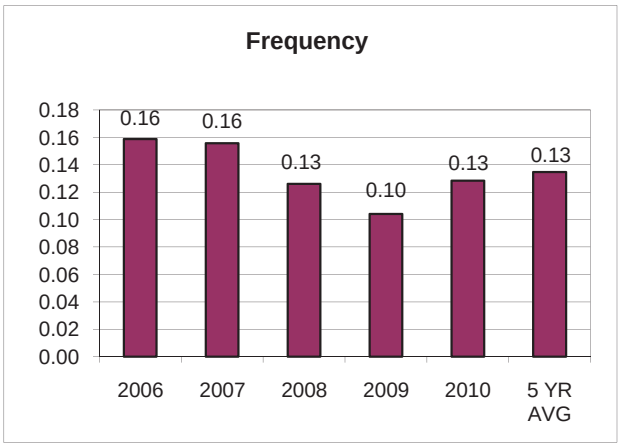


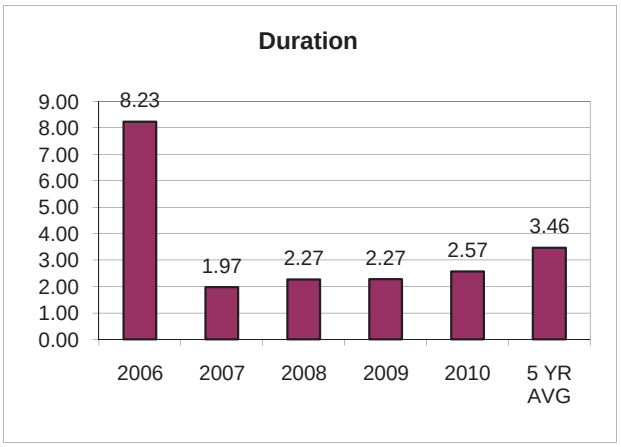


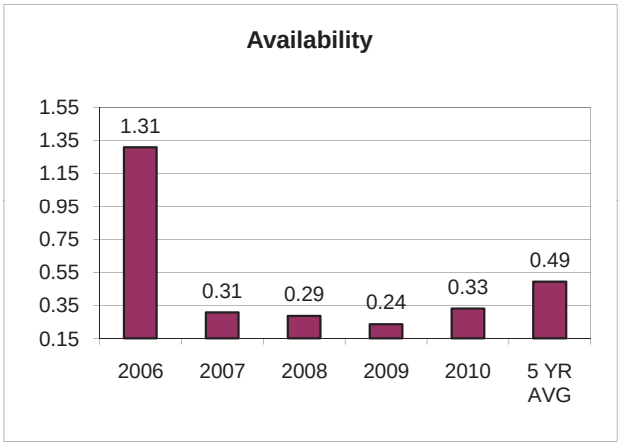


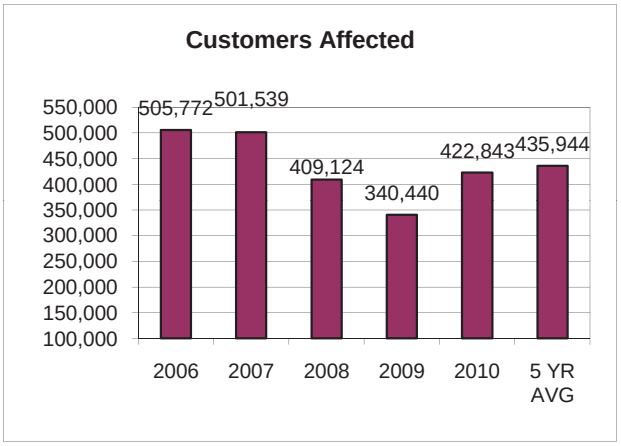


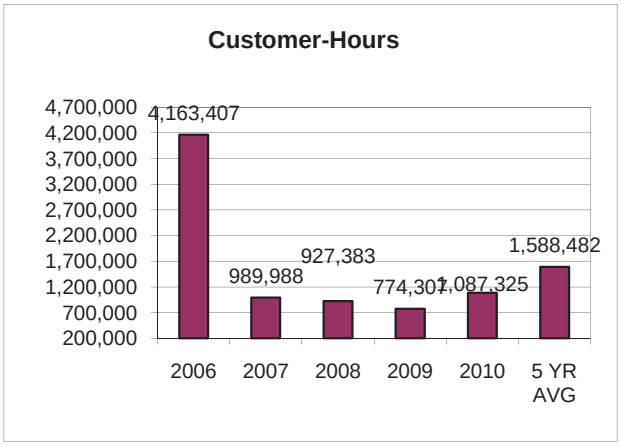
Consolidated Edison - System
(Excluding Major Storms)

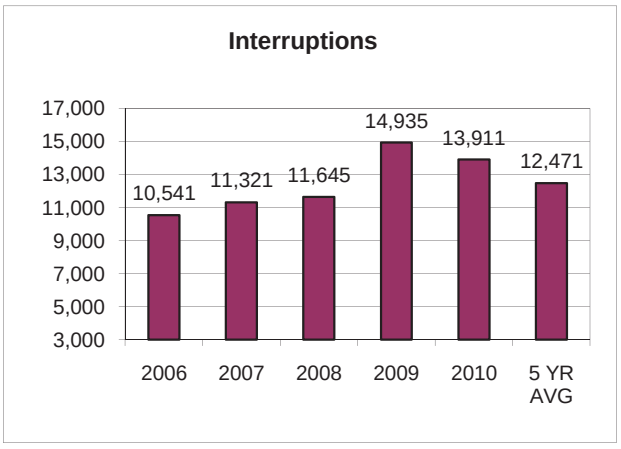




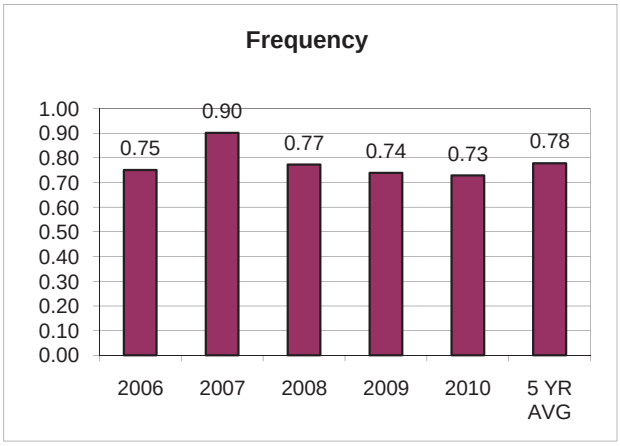


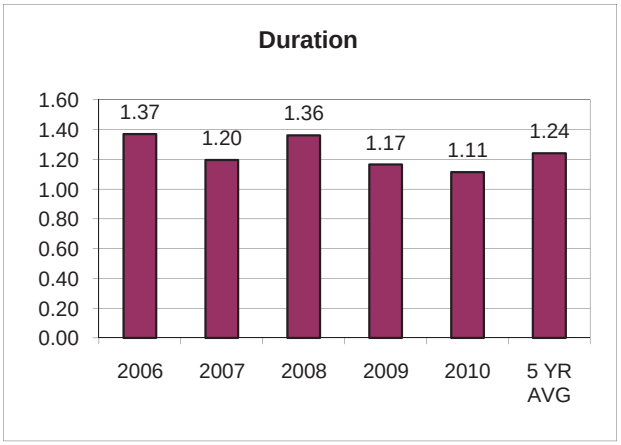


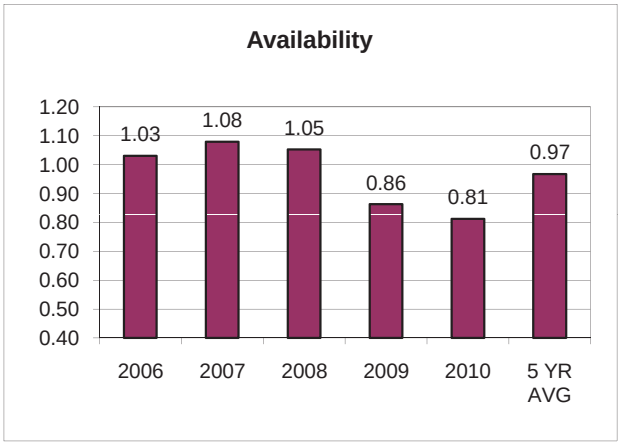


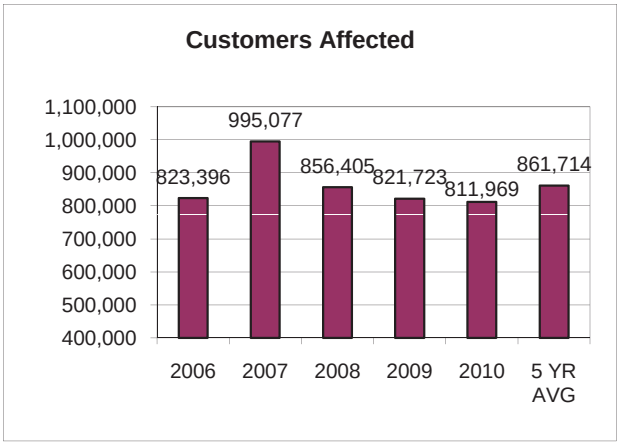


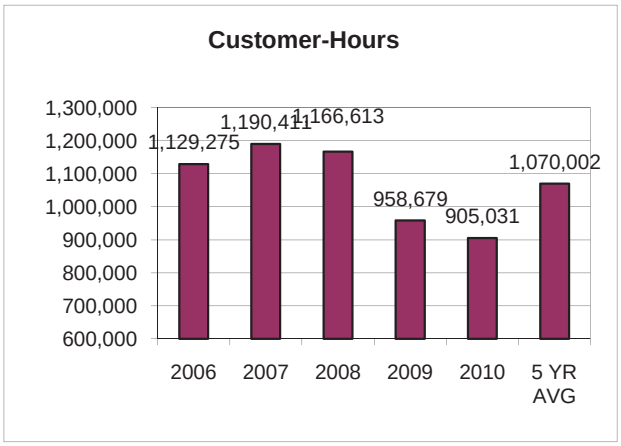
Long Island Power Authority
(Excluding Major Storms)

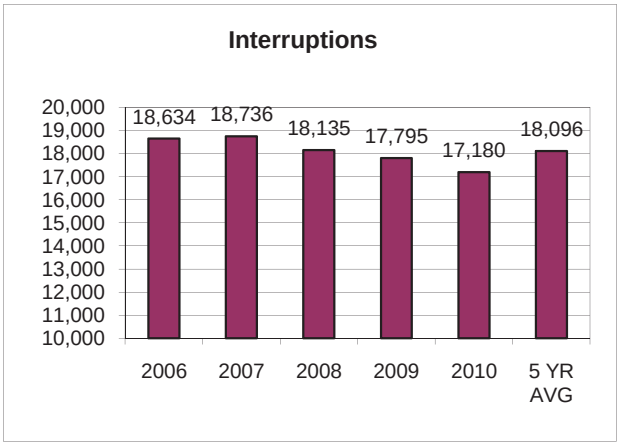






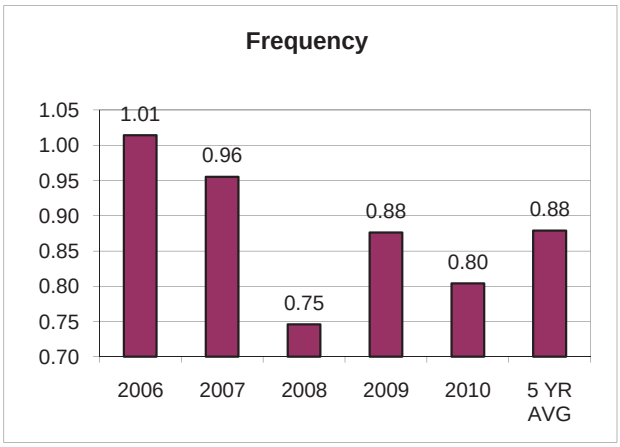


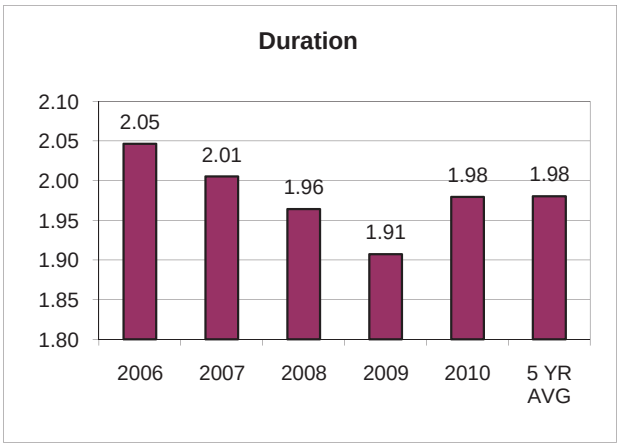


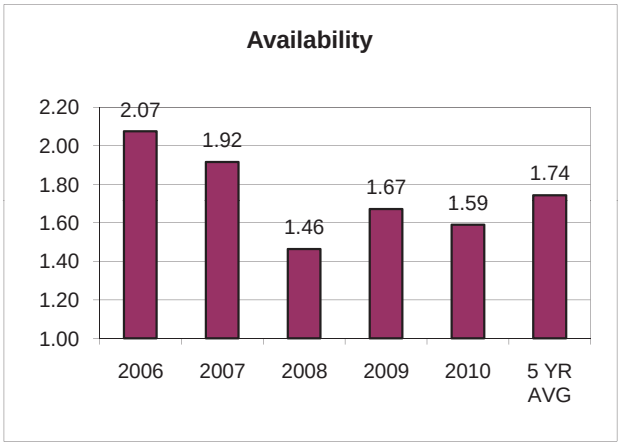


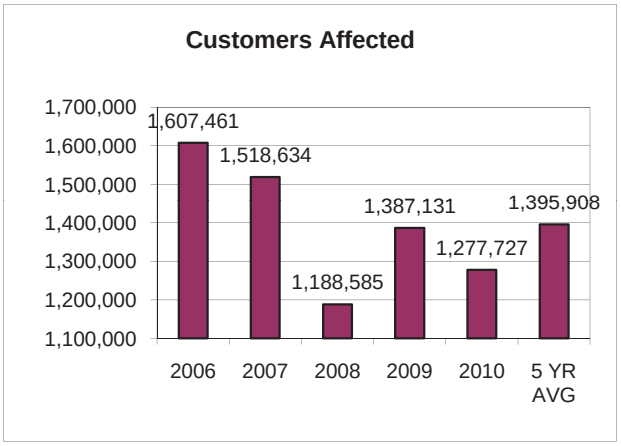
* LIPA is not regulated by the NYS PSC.

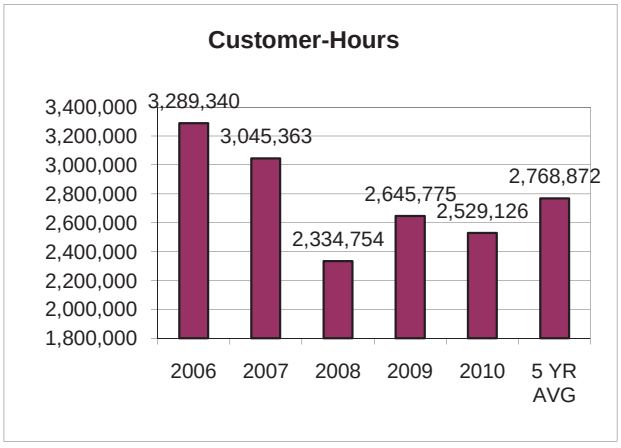
National Grid
(Excluding Major Storms)

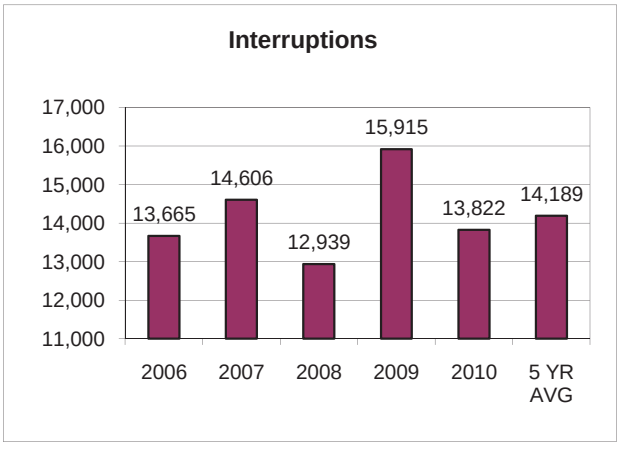




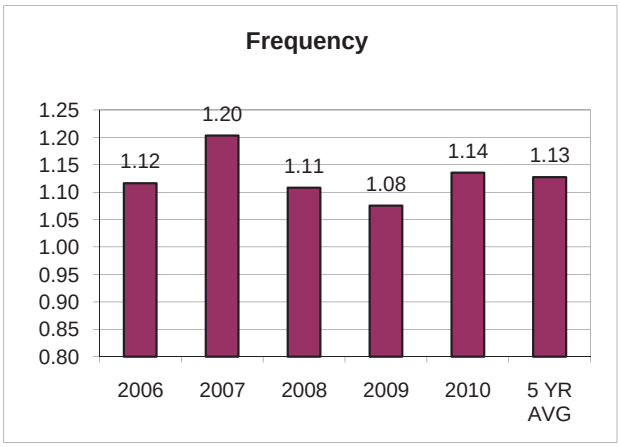


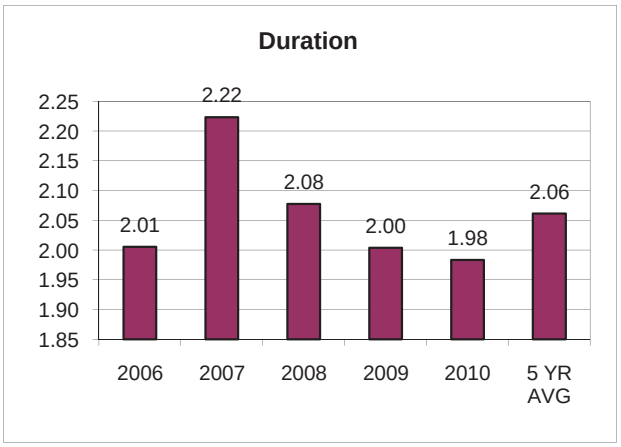


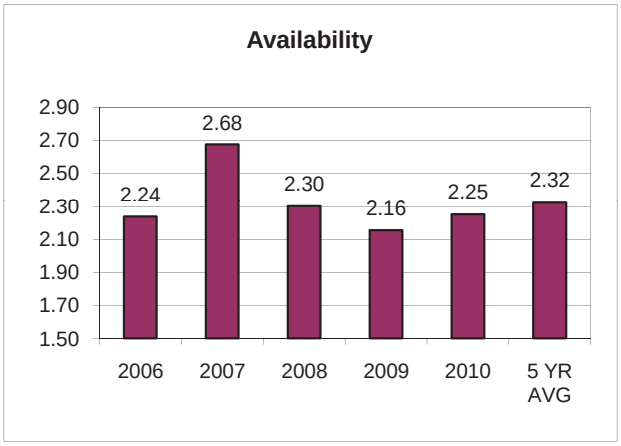


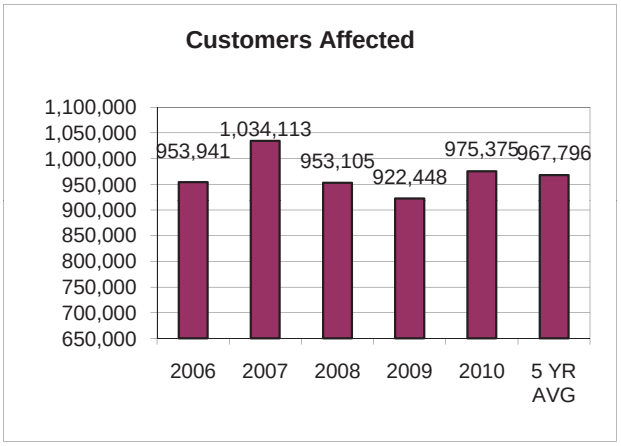


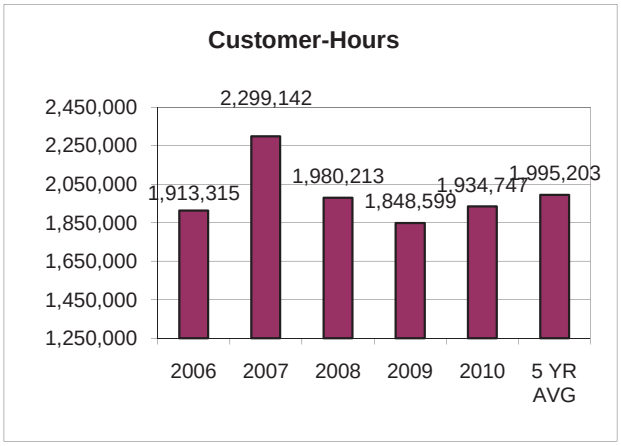
New York State Electric and Gas
(Excluding Major Storms)

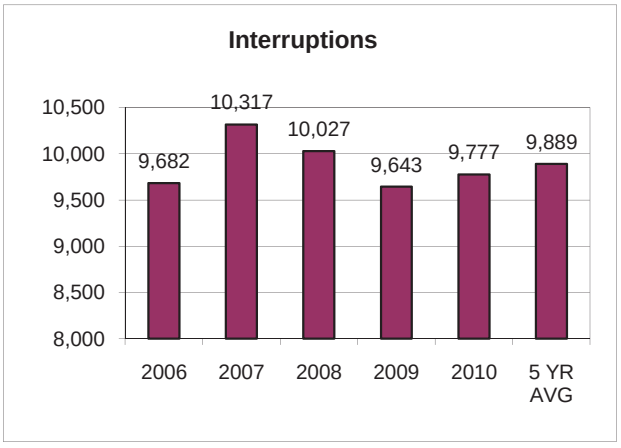




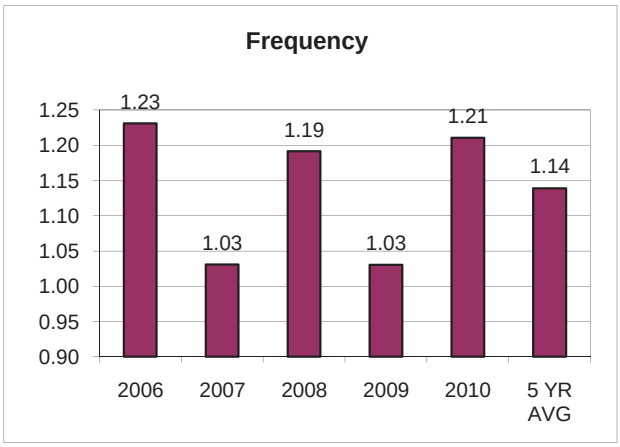


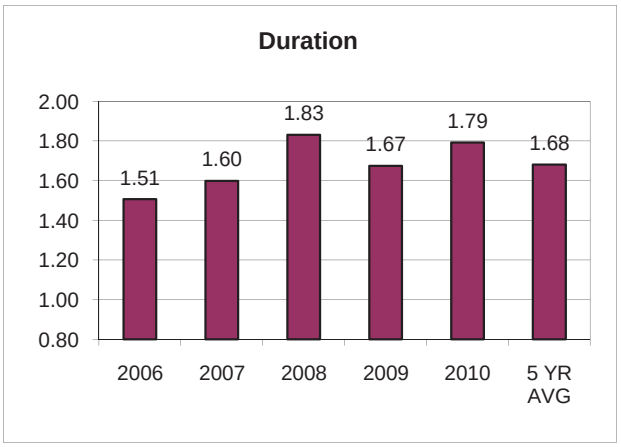


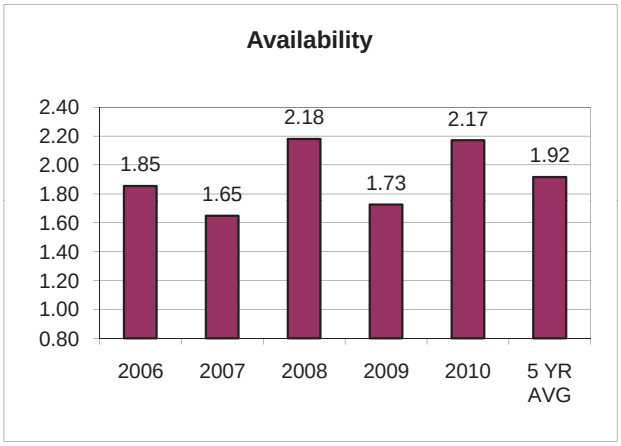


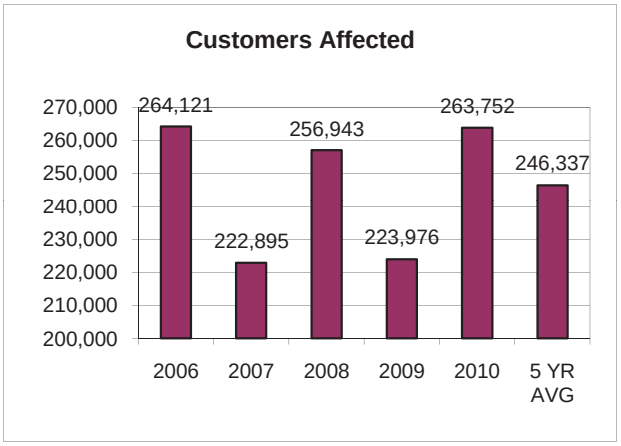


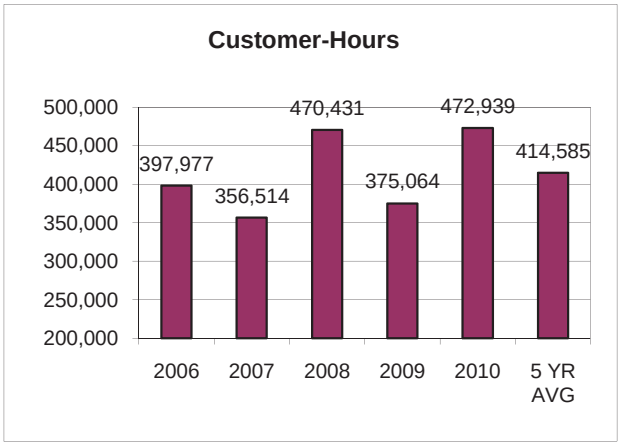
Orange and Rockland Utilities
(Excluding Major Storms)

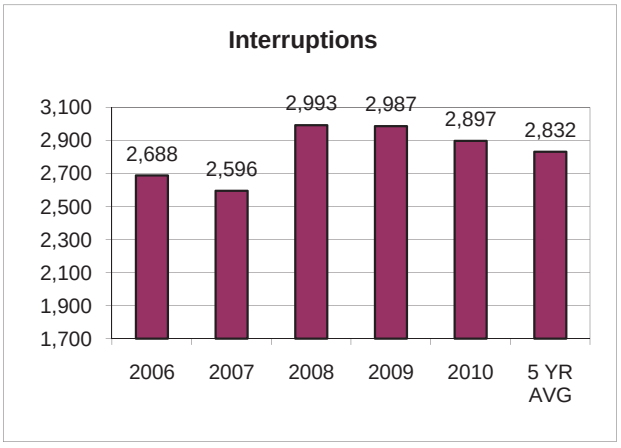




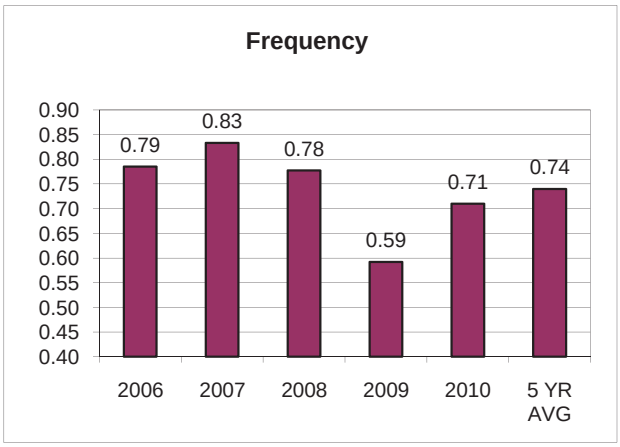


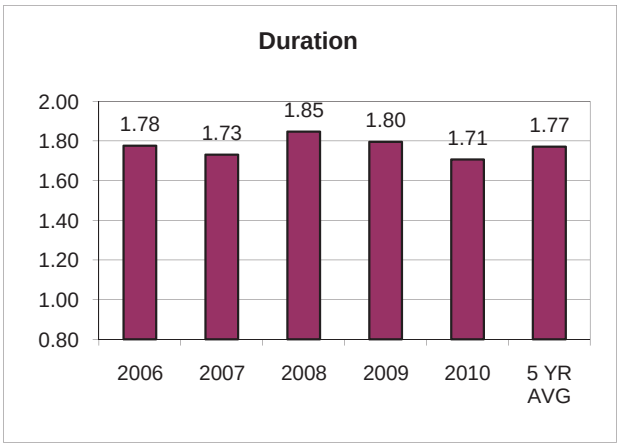


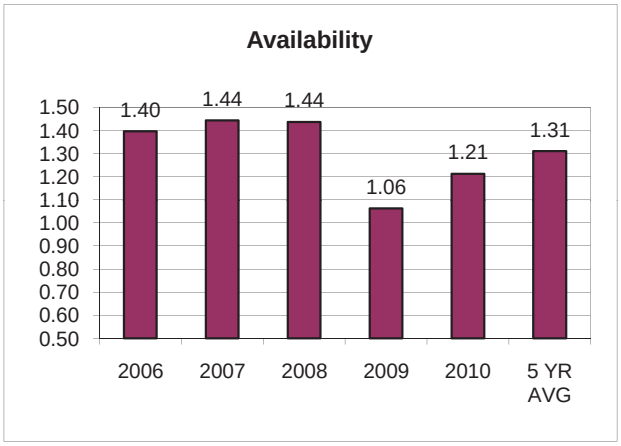


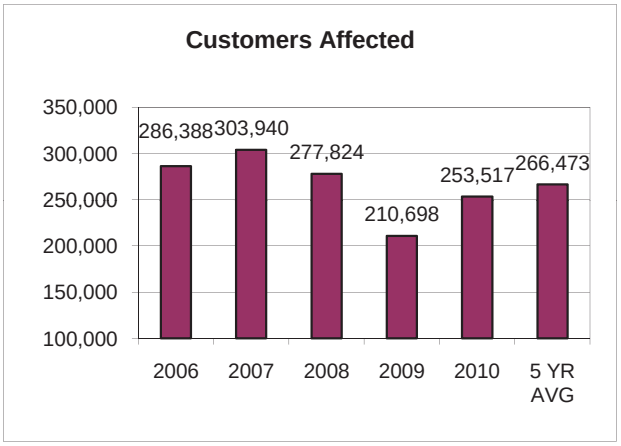


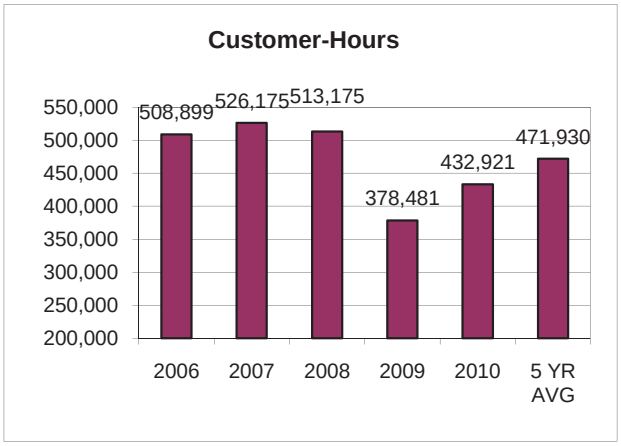
Rochester Gas and Electric
(Excluding Major Storms)

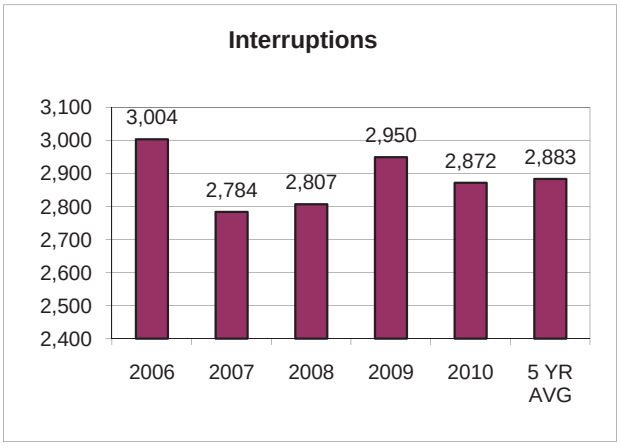












PACIFIC GAS AND ELECTRIC COMPANY

2011 ANNUAL ELECTRIC DISTRIBUTION RELIABILITY REPORT (D.96-09-045 AND D.04-10-034)

MARCH 1, 2012

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NOTE: Some graphics provided in this report are photocopies of graphics used in earlier reports and are not completely legible. Please contact PG&E if you have any questions about the information provided in those graphics.

General

This is the 2011 Reliability Report for Pacific Gas & Electric Company as required by Decision 96-09-045. This report also includes system reliability data based on the IEEE Standard 1366 as stated in the CPUC approved PG&E Advice Letter 3812-E (approved on July 25, 2011). In addition, this report includes some additional reporting requirements as specified in Decision 04-10-034 and its Appendix A. The report consists of the following:

Section	Description
1.	System Indices For The Last 10 Years (2002-2011)
2.	Significant Outage Events Of 2011
3.	Customers Experiencing >12 Sustained Outages In 2011
4.	Attachment 1 - Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)
5.	Attachment 2 - PG&E Service Territory Map
6.	Attachment 3 - Summary list of Excludable Major Events per D. 96-09-045
7.	Attachment 4 - System Indices For The Last 10 Years (2002-2011) Based on IEEE 1366
8.	Attachment 5 – Governor Proclamations
9.	Attachment 6 - Historical (2001-2010) Outage Information From Prior Reports

PG&E maintains account specific information for customers affected by outages that are recorded in PG&E's outage reporting system (OUTAGE). This system tracks outages at the generation, transmission, substation, primary distribution, and individual transformer levels. Additionally, OUTAGE models the actual electric switching operations during the circuit restoration process (which is useful for determining accurate customer outage minutes for calculating SAIDI and CAIDI). PG&E used its most current outage data to compile the information contained in this report.

SECTION 1

System Indices (2002-2011)

Table 1 lists the required SAIDI, SAIFI, and MAIFI values in accordance with Appendix A of D. 96-09-045. As required by Decision 04-10-034, CAIDI values are also included in this report.

Table 1 - System Indices (2002-2011)
(Includes Transmission, Distribution and Generation related outages)

	Major Events Included				Major Events Excluded			
YEAR	SAIDI	SAIFI	MAIFI	CAIDI	SAIDI	SAIFI	MAIFI	CAIDI
2002	400.8	1.763	2.698	227.3	146.7	1.174	2.095	125.0
2003	208.0	1.411	1.878	147.5	201.8	1.389	1.874	145.3
2004	205.3	1.426	1.875	143.9	205.1	1.425	1.872	143.9
2005	249.3	1.549	1.895	161.0	187.1	1.407	1.782	132.9
2006	280.5	1.728	1.768	162.3	150.9	1.273	1.532	118.5
2007	159.9	1.249	1.565	128.0	159.9	1.249	1.565	128.0
2008	416.4	1.563	1.829	266.4	166.7	1.254	1.634	132.9
2009	208.2	1.308	1.540	159.1	163.1	1.193	1.474	136.7
2010	246.3	1.384	1.488	178.0	168.6	1.167	1.311	144.4
2011	275.7	1.261	1.478	218.6	235.9	1.193	1.434	197.8

Included in this annual report is supplemental information noted in Tables 2 and 3 representing the corresponding indexes separated for both the distribution and transmission systems. It should be noted that the totals from these two tables will not exactly match Table 1 for the following reasons:

(a) Generation related outages are included in Table 1 but not in Tables 2 and 3;
(b) There are database limitations related to the major event exclusion process when separating the transmission and distribution systems.

Please also note, the MAIFI information is not included in these tables since the existing non-SCADA automatic recording devices (EON[1] or Smart Meters) do not distinguish between the two systems.

Table 2 - Distribution System Indices (2002-2011)
(Excludes transmission and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2002	358.1	1.615	221.7	136.2	1.086	125.4
2003	187.6	1.283	146.3	181.6	1.263	143.9
2004	181.7	1.277	142.2	181.5	1.277	142.1
2005	210.9	1.352	156.0	157.7	1.222	129.0
2006	251.0	1.534	163.6	136.5	1.137	120.1
2007	138.6	1.117	124.0	138.6	1.117	124.0
2008	377.8	1.428	264.6	150.3	1.155	130.1
2009	192.8	1.204	160.2	149.9	1.099	136.3
2010	220.0	1.251	175.9	153.4	1.066	143.9
2011	243.9	1.115	218.8	215.5	1.085	198.7

Table 3 - Transmission System Indices (2002-2011)
(Excludes distribution and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2001	21.6	0.138	156.7	20.3	0.132	154.5
2002	42.1	0.147	285.9	10.5	0.088	120.1
2003	20.4	0.128	159.7	20.2	0.127	159.5
2004	23.3	0.148	157.7	23.3	0.148	157.8
2005	38.3	0.197	195.1	29.3	0.185	158.8
2006	29.5	0.193	152.5	14.4	0.136	105.4
2007	21.3	0.132	161.5	21.3	0.132	161.5
2008	38.3	0.135	284.3	16.2	0.099	163.6
2009	15.4	0.105	147.0	13.2	0.094	140.7
2010	26.4	0.133	198.4	15.2	0.101	149.8
2011	31.7	0.144	219.7	29.1	0.129	225.2

Excludable Major Events

Appendix A to D. 96-09-045 defines Excludable Major Events as follows:

> Each utility will exclude from calculation of its reliability indices major events that meet either of the two following criteria: (a) the event is caused by earthquake, fire, or storms of sufficient intensity to give rise to a state of emergency being declared by the government, or (b) any other disaster not in (a) that affects more than 15% of the system facilities or 10% of the utility's customers, whichever is less for each event.

[1] On November 18, 2011 the EON recording system was removed from service. Momentary outage data is now being collected from SCADA devices and through the use of Smart Meters. Data collection from the Smart Meters is more effective than the previous EON system since Smart Meters don't rely on customer volunteers having EON devices securely connected inside their buildings. PG&E anticipates that the number of future momentary outages recorded will increase slightly as a result of this more effective approach.

There were two Excludable Major Events in 2011, as defined in Appendix A of D. 96-09-045. These two excludable major events fall under category (a) above. In calculating the major event exclusions in this report, PG&E is utilizing the same methodology that it used in its 2005 RPIM, and which was accepted by the Commission in Resolution E-4003 approving PG&E's Advice Letter reporting its 2005 RPIM results. In its Advice Letter reporting the 2005 RIM results, PG&E explained its process for applying state of emergency proclamations to determine what divisions and outages should be excluded from the calculation of system reliability indices. PG&E used the same process for determining the major event exclusions for 2011. This methodology is as follows:

- Identify the counties in the governmental declaration of a disaster that are in PG&E's service territory;
- Determine the percentage of the area of each division covered by the counties identified in the governmental declaration;
- Outages in the divisions with 50 percent or more of their area included in a declared state of emergency or natural disaster area are considered for exclusion. Divisions with less than 50 percent of their area included in a declared state of emergency or natural disaster area are not considered for exclusion;
- Determine the daily average, by month, of the number of sustained outages, customer minutes and customer interruptions for each division using five years (2006-2010) of data;
- For each division, during the same time periods under consideration, PG&E compares the daily number of sustained outages, customer minutes and customer interruptions to the corresponding five-year average. PG&E excludes any day where the number of sustained outages AND customer minutes AND customer interruptions for EACH division exceed the five-year average for that division by a factor of two or more.

The first event was due to severe storms that commenced on December 18, 2010 and continued through January 4, 2011. The Governor issued a proclamation on January 28, 2011 for 8 counties within PG&E's service territory due to heavy rainfall, flooding and road damage occurring between December 18, 2010 and January 4, 2011. In applying the methodology described above, PG&E has only excluded only outages in two divisions (Kern and Los Padres) for the dates shown in Table 4 below.

The second event was due to a series of late winter storms that significantly affected specific divisions on specific dates. The Governor issued a proclamation on April 15, 2011 for 18 counties within PG&E's service territory due to heavy rainfall and severe local damage occurring between March 15, 2011 and March 27, 2011. In applying the methodology described above, PG&E has excluded outages in seven divisions (Central Coast, Diablo, Los Padres, Mission, North Coast-Humboldt area, North Coast-Sonoma area, and Yosemite) for the dates shown in Table 4 below.

Table 4 summarizes each of the adjustments described above.

Table 4 - Summary of Adjustments to 2011 SAIDI and SAIFI Data

Line #	Description	Division or System	Date	SAIDI	SAIFI
1	**Year End Results Including All Outages**				
2	January 1 – December 31, 2011	System	Jan – Dec, 2011	275.7	1.261
3	**Winter Storm Exclusions (Jan. 1 -4)**				
4		Kern	January 2, 2011	0.10	0.001
5		Los Padres	January 2, 2011	0.21	0.001
6	**Winter Storm Exclusions (Mar. 15-27)**				
7		Central Coast	March 18-20 and 24-27, 2011	4.35	0.026
8		Diablo	March 19 and 24, 2011	0.24	0.002
10		North Coast- Humboldt	March 17, 19, 20 and 24, 2011	3.63	0.007
11		Los Padres	March 20, 2011	0.23	0.001
12		Mission	March 24 and 25 2011	0.34	0.002
13		North Coast - Sonoma	March 19-22, 24 and 27 2011	5.08	0.014
14		Yosemite	March 19-25, 2011	25.53	0.012
15	**Year End Results Less Exclusions**				
16				235.9	1.194

SECTION 2

Significant Outage Events Of 2011

Table 5 lists the ten largest outage events experienced during 2011. PG&E interprets this reporting requirement as the ten events (individual days or in some cases a group of consecutive days) with a significant number of customer interruptions in the system or a portion of the system. These events are listed in descending order of customer interruptions.

Table 5 - Ten Largest 2011 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A series of cold and powerful storms moved through the Service Area with the majority of outages resulting from low snow and gusty winds. The bulk of outage activity occurred overnight Sat 19th to Sun 20th as strong southeasterly wind gusts were observed in many locations (SF Apt 45 mph, Stockton 44 mph, Redding 45 mph, Bakersfield 40 mph). Excessive low elevation snowfall caused significant outage activity. Yosemite Division was hard hit with low snow (snow totals - 38" reported at 4200' above Oakhurst)	Mar 17 - 22	581,949	256	1,839**	Y-Partial (See Table 4)
2	After a short respite from inclement weather, another strong and cold storm moved into the Service Area on March 24th. Once again, strong southerly wind gusts were observed (SF Apt 38 mph, Oakland 37 mph). Low elevation snow was the main adverse weather issue with Sierra, North Valley, Stockton, and Yosemite Divisions hard hit with low snow. (snow totals - 13" in Shingletown, 25" at 3700' along Highway 88, 34" at the 4200' above Oakhurst)	Mar 24 – 27	464,767	504	1,839**	Y-Partial (See Table 4)
3	A series of cold storms moved across the Service Area starting Valentines day until Feb 19. On the 17th very cold air filtered into the region lowering snow levels enough to create low snow related outages across the Coast Ranges of Humboldt Divisions, and down the entire Sierra Nevada foothills. The hardest hit divisions were Humboldt, Yosemite, and Sierra. (snow totals - 14" in Shingletown, 38" at 3700' on Highway 88, 12" at 2600' in Humboldt County). Snow recorded down to 500 feet in Humboldt.	Feb 15 – 19	357,802	151		N
4	High pressure in the Great Basin and low pressure off the southern California coast set the stage for strongest northeast wind event to hit the Service Area in the last 20 years. Gusts up to 50 mph were common in the Sierra with the highest gust of 94 mph recorded on Mt. Elizabeth in the Yosemite division. Winds were quite strong in the Valley as well (Stockton 52 mph, Redding 40 mph, Fresno 36 mph)	Nov 30 – Dec 1	325,942	131		N
5	A strong and cold storm affected the entire Service Area with low snow falling in the Northern Region and gusty southerly winds and heavy rains further east and south. The hardest hit divisions were Humboldt, North Valley, and Sierra. (snow totals – 18" in Shingletown, 20" in Susanville, 19" in Grass Valley). Snow recorded down to 500 feet in Humboldt.	Feb 24 - 25	187,851	152		N
6	An early season storm moved through the Service Area bringing moderate southerly winds and heavy precipitation rates. In Ukiah, more than a half inch of rain fell within one hour in the early morning. The Central Valley Region experienced the most outages. These were mainly pole fires/flashover caused by the first rain to fall in the area after months of prolonged dry weather.	Oct 5	100,357	24		N
7	Widespread thunderstorm activity broke out across the southern part of the Service Area early in the morning with the biggest impacts in Fresno and Kern divisions. The Bakersfield area in Kern was hit particularly hard by lightning, with Kern Division recording 3833 lightning strikes for the day.	Sept 10	77,443	69		N
8	A late season cold storm moved through the Service Area with low snow outage conditions across divisions in the Sierra Nevada, especially the Sierra Division. (8" of snow at 3700' along Highway 88) Thunderstorms and associated lightning also broke out across the Central Valley. Impacts were minimal in the Bay Area and Central Coast Regions.	May 15	62,863	30		N
9	A non-weather related outage day with maximum temperatures along the Central Valley in the mid 80s. The outage count was only slightly above average for a June day; however, a large number of customers in the East Bay were affected by two distribution substation outages.	Jun 12	50,028	15		N
10	The first warm day of the spring was observed in many areas. San Jose had a high of 84. This could have contributed to the above average outage total. No other adverse weather was reported. The largest impacts were recorded in the San Francisco and San Jose Divisions.	Apr 1	44,177	6		N

*** Note:** Values exclude single distribution line transformer and planned outages.

** During the course of the March 17-27, 2011 storms, approximately 1,839 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 110 vegetation crews, 10 contract crews (approximately 200 individuals), and 36 mutual aid crews (approximately 175 individuals) were utilized to supplement existing resources.

Of the ten largest events listed in Table 5, the following events met the CPUC definition of a major event under criteria (a) state of emergency declaration.

- March 17-22, 2011
- March 24-27, 2011

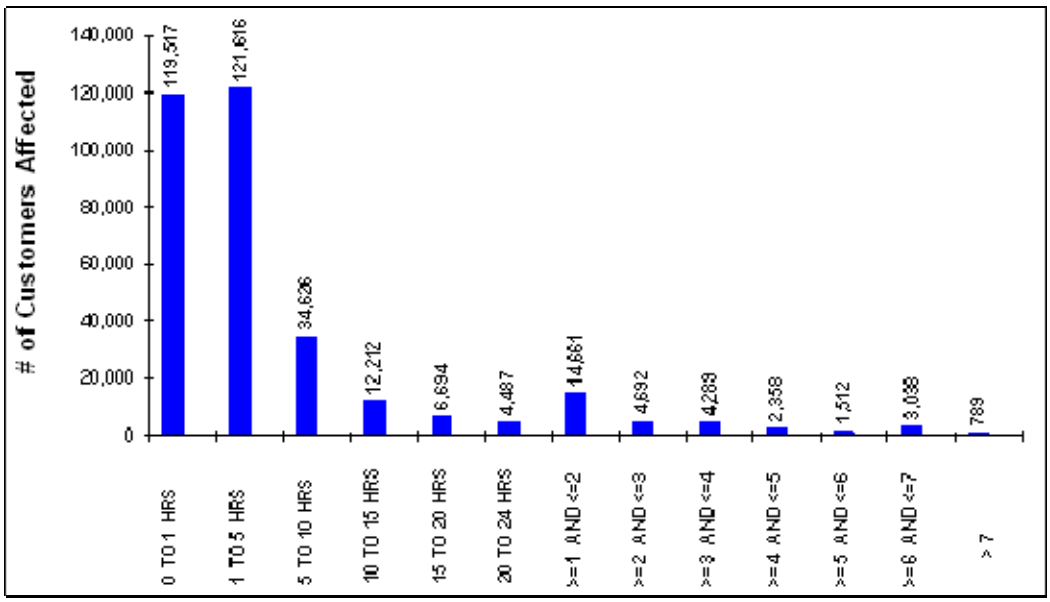
Although these storms have been identified as two separate consecutive-day events in Table 5, PG&E has combined them into one event in this report since it better represents the storm's impact on our customers. Table 6 below indicates the number of customers without service at periodic intervals for this combined event (March 17 – 27, 2011). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

NOTE: The number of customers affected shown in the histogram below shows 330,491 customers. However, 82 customers recorded in PG&E's OUTAGE database have been excluded from this table since they were vacant campsites without any campers / customers.

Table 6 / Figure 1 – 2011 Outage Event Duration Summary

3/17/2011 - 3/27/2011		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	119,517	36.16%
1 TO 5 HRS	121,616	72.96%
5 TO 10 HRS	34,626	83.44%
10 TO 15 HRS	12,212	87.13%
15 TO 20 HRS	6,694	89.16%
20 TO 24 HRS	4,487	90.52%
>=1 AND <=2	14,661	94.95%
>=2 AND <=3	4,692	96.37%
>=3 AND <=4	4,289	97.67%
>=4 AND <=5	2,358	98.38%
>=5 AND <=6	1,512	98.84%
>=6 AND <=7	3,038	99.76%
> 7	789	100.00%
Total	330,491	

Table 6 / Figure 2 – 2011 Outage Event Duration Graph



The excludable portion of this storm event consisted of 1,137 sustained outages. Approximately 1,694 PG&E employees from the divisions noted in Table 4 responded to this event. In addition, approximately 120 crews (vegetation and contract crews) were utilized to supplement the existing resources.

Of the total customers that experienced outages during the excludable portion of this eleven-day event, 90.5% were restored within 24 hours. Approximately 5.0% of the customers impacted by the storm were without service after 48 hours. This was primarily due to the severity and duration of the storm activity. Restoration to the remaining customers was delayed due to the heavy damage to equipment (poles and conductor) as a result of trees falling on and through the lines. This was prevalent in the northern and central coast areas. The tables below provide further outage duration detail as well as the damage caused (in term of equipment).

Table 7 – 2011 Outage Duration Details

Major Event Days: March 17-27, 2011			Major Event Days: March 17-27, 2011			Major Event Days: March 17-27, 2011		
Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %
0 TO 1 HRS	119,517	36.16%	98 TO 99 HRS	0	97.71%	178 TO 179 HRS	0	99.83%
1 TO 5 HRS	121,616	72.96%	99 TO 100 HRS	0	97.71%	179 TO 180 HRS	19	99.84%
5 TO 10 HRS	34,626	83.44%	100 TO 101 HRS	37	97.72%	180 TO 181 HRS	2	99.84%
10 TO 15 HRS	12,212	87.13%	101 TO 102 HRS	112	97.75%	181 TO 182 HRS	0	99.84%
15 TO 20 HRS	6,694	89.16%	102 TO 103 HRS	68	97.77%	182 TO 183 HRS	9	99.84%
20 TO 24 HRS	4,487	90.52%	103 TO 104 HRS	168	97.82%	183 TO 184 HRS	18	99.84%
24 TO 25 HRS	416	90.64%	104 TO 105 HRS	2	97.82%	184 TO 185 HRS	0	99.84%
25 TO 26 HRS	583	90.82%	105 TO 106 HRS	248	97.90%	185 TO 186 HRS	426	99.97%
26 TO 27 HRS	2,438	91.56%	106 TO 107 HRS	41	97.91%	186 TO 187 HRS	46	99.99%
27 TO 28 HRS	404	91.68%	107 TO 108 HRS	126	97.95%	187 TO 188 HRS	0	99.99%
28 TO 29 HRS	151	91.73%	108 TO 109 HRS	390	98.07%	188 TO 189 HRS	0	99.99%
29 TO 30 HRS	959	92.02%	109 TO 110 HRS	301	98.16%	189 TO 190 HRS	5	99.99%
30 TO 31 HRS	770	92.25%	110 TO 111 HRS	107	98.19%	190 TO 191 HRS	0	99.99%
31 TO 32 HRS	96	92.28%	111 TO 112 HRS	42	98.20%	191 TO 192 HRS	0	99.99%
32 TO 33 HRS	47	92.29%	112 TO 113 HRS	64	98.22%	192 TO 193 HRS	0	99.99%
33 TO 34 HRS	1,171	92.65%	113 TO 114 HRS	50	98.24%	193 TO 194 HRS	0	99.99%
34 TO 35 HRS	504	92.80%	114 TO 115 HRS	0	98.24%	194 TO 195 HRS	0	99.99%
35 TO 36 HRS	755	93.03%	115 TO 116 HRS	46	98.25%	195 TO 196 HRS	0	99.99%
36 TO 37 HRS	62	93.05%	116 TO 117 HRS	411	98.38%	196 TO 197 HRS	0	99.99%
37 TO 38 HRS	1,372	93.46%	117 TO 118 HRS	25	98.38%	197 TO 198 HRS	0	99.99%
38 TO 39 HRS	463	93.60%	118 TO 119 HRS	0	98.38%	198 TO 199 HRS	24	100.00%
39 TO 40 HRS	118	93.64%	119 TO 120 HRS	0	98.38%	199 TO 200 HRS	0	100.00%
40 TO 41 HRS	143	93.68%	120 TO 121 HRS	137	98.43%	200 TO 201 HRS	0	100.00%
41 TO 42 HRS	516	93.84%	121 TO 122 HRS	37	98.44%	201 TO 202 HRS	0	100.00%
42 TO 43 HRS	781	94.07%	122 TO 123 HRS	21	98.44%	202 TO 203 HRS	0	100.00%
43 TO 44 HRS	547	94.24%	123 TO 124 HRS	0	98.44%	203 TO 204 HRS	0	100.00%
44 TO 45 HRS	408	94.36%	124 TO 125 HRS	102	98.47%	204 TO 205 HRS	0	100.00%
45 TO 46 HRS	492	94.51%	125 TO 126 HRS	68	98.49%	205 TO 206 HRS	0	100.00%
46 TO 47 HRS	919	94.79%	126 TO 127 HRS	0	98.49%	206 TO 207 HRS	0	100.00%
47 TO 48 HRS	546	94.95%	127 TO 128 HRS	45	98.51%	207 TO 208 HRS	0	100.00%
48 TO 49 HRS	68	94.97%	128 TO 129 HRS	58	98.53%	208 TO 209 HRS	0	100.00%
49 TO 50 HRS	175	95.03%	129 TO 130 HRS	1	98.53%	209 TO 210 HRS	0	100.00%
50 TO 51 HRS	351	95.13%	130 TO 131 HRS	17	98.53%	210 TO 211 HRS	2	100.00%
51 TO 52 HRS	91	95.16%	131 TO 132 HRS	0	98.53%	211 TO 212 HRS	0	100.00%
52 TO 53 HRS	48	95.18%	132 TO 133 HRS	125	98.57%	212 TO 213 HRS	0	100.00%
53 TO 54 HRS	197	95.23%	133 TO 134 HRS	55	98.59%	213 TO 214 HRS	0	100.00%
54 TO 55 HRS	227	95.30%	134 TO 135 HRS	79	98.61%	214 TO 215 HRS	0	100.00%
55 TO 56 HRS	548	95.47%	135 TO 136 HRS	65	98.63%	215 TO 216 HRS	0	100.00%
56 TO 57 HRS	49	95.48%	136 TO 137 HRS	51	98.65%	216 TO 217 HRS	0	100.00%
57 TO 58 HRS	285	95.57%	137 TO 138 HRS	36	98.66%	217 TO 218 HRS	0	100.00%
58 TO 59 HRS	259	95.65%	138 TO 139 HRS	323	98.75%	218 TO 219 HRS	0	100.00%
59 TO 60 HRS	116	95.68%	139 TO 140 HRS	52	98.77%	219 TO 220 HRS	0	100.00%
60 TO 61 HRS	462	95.82%	140 TO 141 HRS	54	98.79%	220 TO 221 HRS	0	100.00%
61 TO 62 HRS	208	95.89%	141 TO 142 HRS	26	98.79%	221 TO 222 HRS	0	100.00%
62 TO 63 HRS	260	95.97%	142 TO 143 HRS	149	98.84%	222 TO 223 HRS	0	100.00%
63 TO 64 HRS	408	96.09%	143 TO 144 HRS	11	98.84%	223 TO 224 HRS	0	100.00%
64 TO 65 HRS	141	96.13%	144 TO 145 HRS	0	98.84%	224 TO 225 HRS	0	100.00%
65 TO 66 HRS	259	96.21%	145 TO 146 HRS	116	98.88%	225 TO 226 HRS	0	100.00%
66 TO 67 HRS	185	96.27%	146 TO 147 HRS	0	98.88%	226 TO 227 HRS	0	100.00%
67 TO 68 HRS	109	96.30%	147 TO 148 HRS	69	98.90%	227 TO 228 HRS	0	100.00%
68 TO 69 HRS	207	96.36%	148 TO 149 HRS	346	99.00%	228 TO 229 HRS	0	100.00%
69 TO 70 HRS	19	96.37%	149 TO 150 HRS	71	99.02%	229 TO 230 HRS	0	100.00%
70 TO 71 HRS	20	96.37%	150 TO 151 HRS	166	99.07%	230 TO 231 HRS	0	100.00%
71 TO 72 HRS	0	96.37%	151 TO 152 HRS	0	99.07%	231 TO 232 HRS	0	100.00%
72 TO 73 HRS	146	96.42%	152 TO 153 HRS	59	99.09%	232 TO 233 HRS	0	100.00%
73 TO 74 HRS	136	96.46%	153 TO 154 HRS	230	99.16%	233 TO 234 HRS	0	100.00%
74 TO 75 HRS	0	96.46%	154 TO 155 HRS	206	99.22%	234 TO 235 HRS	0	100.00%
75 TO 76 HRS	6	96.46%	155 TO 156 HRS	199	99.28%	235 TO 236 HRS	0	100.00%
76 TO 77 HRS	1,200	96.82%	156 TO 157 HRS	33	99.29%	236 TO 237 HRS	0	100.00%
77 TO 78 HRS	322	96.92%	157 TO 158 HRS	44	99.31%	237 TO 238 HRS	0	100.00%
78 TO 79 HRS	72	96.94%	158 TO 159 HRS	209	99.37%	238 TO 239 HRS	0	100.00%
79 TO 80 HRS	115	96.98%	159 TO 160 HRS	536	99.53%	239 TO 240 HRS	0	100.00%
80 TO 81 HRS	0	96.98%	160 TO 161 HRS	51	99.55%	240 TO 241 HRS	0	100.00%
81 TO 82 HRS	129	97.02%	161 TO 162 HRS	234	99.62%	241 TO 242 HRS	0	100.00%
82 TO 83 HRS	559	97.19%	162 TO 163 HRS	78	99.64%	242 TO 243 HRS	0	100.00%
83 TO 84 HRS	21	97.19%	163 TO 164 HRS	91	99.67%	243 TO 244 HRS	6	100.00%
84 TO 85 HRS	96	97.22%	164 TO 165 HRS	98	99.70%	244 TO 245 HRS	0	100.00%
85 TO 86 HRS	102	97.25%	165 TO 166 HRS	202	99.76%	245 TO 246 HRS	0	100.00%
86 TO 87 HRS	43	97.26%	166 TO 167 HRS	0	99.76%	246 TO 247 HRS	0	100.00%
87 TO 88 HRS	45	97.28%	167 TO 168 HRS	0	99.76%	247 TO 248 HRS	0	100.00%
88 TO 89 HRS	112	97.31%	168 TO 169 HRS	132	99.80%	248 TO 249 HRS	0	100.00%
89 TO 90 HRS	282	97.40%	169 TO 170 HRS	7	99.80%	249 TO 250 HRS	0	100.00%
90 TO 91 HRS	370	97.51%	170 TO 171 HRS	83	99.83%	250 TO 251 HRS	0	100.00%
91 TO 92 HRS	0	97.51%	171 TO 172 HRS	0	99.83%	251 TO 252 HRS	0	100.00%
92 TO 93 HRS	379	97.62%	172 TO 173 HRS	0	99.83%	252 TO 253 HRS	0	100.00%
93 TO 94 HRS	125	97.66%	173 TO 174 HRS	0	99.83%	253 TO 254 HRS	0	100.00%
94 TO 95 HRS	15	97.67%	174 TO 175 HRS	0	99.83%	254 TO 255 HRS	0	100.00%
95 TO 96 HRS	14	97.67%	175 TO 176 HRS	0	99.83%	255 TO 256 HRS	0	100.00%
96 TO 97 HRS	0	97.67%	176 TO 177 HRS	0	99.83%	256 TO 257 HRS	7	100.00%
97 TO 98 HRS	120	97.71%	177 TO 178 HRS	3	99.83%	Total:	326,828	

Table 8 – March 17 – 27, 2011 Outage Impact (Equipment Report)

Heading	Quantity	
Anchor	13	
Climbing Space	2	
Conductor	1,051	<= Incidences where conductor is down. Approx 200 feet / incident = 210,200 feet or 39.8 miles
Conduit	1	
Connector	19	
Connector/Splice	7	
Crossarm	336	
Cutout	52	
Elbow DB	5	
Elbow LB	1	
Enclosure	1	
Ground	1	
Guy	25	
Hardware/Framing	14	
High Sign	1	
Insulator	47	
Jumper	37	
Lightning Arrestor	2	
Molding	1	
OH Facility	17	
Pole	356	
Streetlight	2	
Switch	2	
Switch/J-Box	2	
Tie Wire	23	
Transformer	184	
Transformer - Padmount	3	
Transformer - Sub-Surface	5	
Tree/Vine	87	
UG Facility	10	
Grand Total	2,307	

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2011

Table 9 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2011. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 9 – Customers Experiencing > 12 Sustained Outages During 2011

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	CAMP EVERS 2105	35
CENTRAL COAST	ROB ROY 2105	21
DE ANZA	LOS GATOS 1107	192
HUMBOLDT	GARBERVILLE 1102	579
KERN	POSO MOUNTAIN 2101	7
LOS PADRES	SISQUOC 1102	3
NORTH BAY	ALTO 1124	15
NORTH BAY	CALISTOGA 1101	9
NORTH BAY	MONTICELLO 1101	10
NORTH BAY	SILVERADO 2104	121
NORTH VALLEY	CHALLENGE 1101	451
NORTH VALLEY	KANAKA 1101	17
NORTH VALLEY	ORO FINO 1102	56
NORTH VALLEY	VOLTA 1101	464
NORTH VALLEY	WYANDOTTE 1109	4
PENINSULA	WOODSIDE 1101	1
SACRAMENTO	GRAND ISLAND 2225	9
SACRAMENTO	JAMESON 1104	32
SACRAMENTO	KNIGHTS LANDING 1101	2
SIERRA	ALLEGHANY 1101	55
SIERRA	APPLE HILL 2102	272
SIERRA	BONNIE NOOK 1101	12
SIERRA	BONNIE NOOK 1102	60
SIERRA	BRUNSWICK 1102	1
SIERRA	EL DORADO P H 2101	908
SIERRA	PEASE 1104	23
SIERRA	PLACERVILLE 2106	684
SONOMA	COTATI 1103	22
STOCKTON	LODI 1102	4
STOCKTON	SALT SPRINGS 2102	1,154
YOSEMITE	OAKHURST 1103	23
YOSEMITE	RACETRACK SUB 1704	136
YOSEMITE	WESTLEY 1103	145

SECTION 4

Attachment 1

Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2006-2011
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	CENTRAL COAST	180.8	1.491	2.499	121.3
2007	CENTRAL COAST	211.7	1.849	2.731	114.5
2008	CENTRAL COAST	268.2	1.807	2.454	148.4
2009	CENTRAL COAST	242.6	2.086	3.120	116.3
2010	CENTRAL COAST	188.2	1.569	3.219	119.9
5-Yr Ave	06-10 Avg	218.3	1.760	2.805	124.1
2011	CENTRAL COAST	410.8	1.495	1.781	274.8
	% Difference	88.2%	-15.1%	-36.5%	121.5%
Year	**Division**	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
2006	DE ANZA	122.4	0.936	1.455	130.8
2007	DE ANZA	94.1	0.865	1.136	108.8
2008	DE ANZA	108.4	0.991	1.529	109.3
2009	DE ANZA	104.4	0.890	1.612	117.2
2010	DE ANZA	118.4	0.987	1.276	120.0
5-Yr Ave	06-10 Avg	109.5	0.934	1.402	117.2
2011	DE ANZA	79.0	0.717	1.482	110.2
	% Difference	-27.9%	-23.2%	5.7%	-6.0%
Year	**Division**	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
2006	DIABLO	130.7	1.238	1.388	105.6
2007	DIABLO	120.3	1.095	1.579	109.9
2008	DIABLO	138.4	1.361	1.964	101.7
2009	DIABLO	148.2	1.348	1.171	110.0
2010	DIABLO	108.4	1.286	1.245	84.3
5-Yr Ave	06-10 Avg	129.2	1.266	1.469	102.3
2011	DIABLO	73.2	0.898	1.376	81.5
	% Difference	-43.3%	-29.0%	-6.4%	-20.3%
Year	**Division**	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
2006	EAST BAY	138.9	1.060	0.882	131.1
2007	EAST BAY	164.2	1.310	1.010	125.4
2008	EAST BAY	102.5	0.894	0.809	114.6
2009	EAST BAY	126.4	1.184	0.862	106.8
2010	EAST BAY	112.1	1.005	0.708	111.6
5-Yr Ave	06-10 Avg	128.8	1.091	0.854	117.9
2011	EAST BAY	100.5	0.951	1.078	105.7
	% Difference	-22.0%	-12.8%	26.2%	-10.3%

Per D. 04-10-034
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Pacific Gas and Electric
Division Reliability Indices
2006-2011
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	FRESNO	202.5	1.688	2.159	120.0
2007	FRESNO	229.0	1.771	2.237	129.3
2008	FRESNO	177.8	1.559	1.766	114.1
2009	FRESNO	136.5	1.225	1.814	111.4
2010	FRESNO	115.2	1.056	1.878	109.1
5-Yr Ave	06-10 Avg	172.2	1.460	1.971	116.8
2011	FRESNO	162.7	1.112	2.016	146.4
	% Difference	-5.5%	-23.8%	2.3%	25.4%
Year	**Division**	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
2006	HUMBOLDT	488.0	2.107	3.206	231.6
2007	HUMBOLDT	552.8	1.833	3.312	301.6
2008	HUMBOLDT	405.4	2.108	2.932	192.3
2009	HUMBOLDT	225.2	1.650	2.367	136.5
2010	HUMBOLDT	420.7	2.189	1.584	192.2
5-Yr Ave	06-10 Avg	418.4	1.977	2.680	210.8
2011	HUMBOLDT	407.7	1.687	2.075	241.6
	% Difference	-2.6%	-14.7%	-22.6%	14.6%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	KERN	175.5	1.564	1.696	112.2
2007	KERN	121.7	1.123	1.580	108.3
2008	KERN	161.1	1.358	1.149	118.7
2009	KERN	105.4	1.177	1.446	89.6
2010	KERN	118.6	1.070	1.419	110.8
5-Yr Ave	06-10 Avg	136.5	1.258	1.458	107.9
2011	KERN	165.0	1.258	1.600	131.1
	% Difference	20.9%	0.0%	9.7%	21.5%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	LOS PADRES	155.0	1.438	2.458	107.7
2007	LOS PADRES	134.6	1.156	2.682	116.4
2008	LOS PADRES	184.6	1.591	2.909	116.0
2009	LOS PADRES	108.3	1.051	1.626	103.0
2010	LOS PADRES	107.3	1.158	1.756	92.6
5-Yr Ave	06-10 Avg	138.0	1.279	2.286	107.1
2011	LOS PADRES	120.4	1.154	2.052	104.3
	% Difference	-12.7%	-9.8%	-10.2%	-2.7%

Per D. 04-10-034
Appendix A
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Pacific Gas and Electric
Division Reliability Indices
2006-2011
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	MISSION	77.0	0.880	1.179	87.5
2007	MISSION	82.1	0.829	1.021	99.1
2008	MISSION	96.7	0.914	1.467	105.8
2009	MISSION	89.1	0.741	0.893	120.3
2010	MISSION	105.2	0.932	0.728	112.8
5-Yr Ave	06-10 Avg	90.0	0.859	1.058	105.1
2011	MISSION	67.6	0.795	0.692	85.1
	% Difference	-24.9%	-7.5%	-34.6%	-19.0%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	NORTH BAY	123.8	0.936	1.301	132.3
2007	NORTH BAY	117.0	1.088	1.782	107.6
2008	NORTH BAY	163.3	1.200	1.765	136.0
2009	NORTH BAY	140.2	1.153	0.944	121.6
2010	NORTH BAY	129.9	1.067	1.346	121.8
5-Yr Ave	06-10 Avg	134.8	1.089	1.428	123.9
2011	NORTH BAY	200.4	1.329	1.222	150.8
	% Difference	48.6%	22.1%	-14.4%	21.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	NORTH VALLEY	279.0	2.092	2.009	133.4
2007	NORTH VALLEY	265.2	1.581	2.130	167.8
2008	NORTH VALLEY	317.0	1.683	3.460	188.4
2009	NORTH VALLEY	217.4	1.352	3.097	160.8
2010	NORTH VALLEY	222.1	1.341	1.893	165.7
5-Yr Ave	06-10 Avg	260.1	1.610	2.518	163.2
2011	NORTH VALLEY	622.1	2.022	2.134	307.6
	% Difference	139.1%	25.6%	-15.2%	88.5%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	PENINSULA	94.3	1.030	1.085	91.5
2007	PENINSULA	80.0	0.754	1.061	106.1
2008	PENINSULA	125.9	1.202	1.795	104.7
2009	PENINSULA	93.5	0.934	0.798	100.2
2010	PENINSULA	121.3	1.399	1.074	86.7
5-Yr Ave	06-10 Avg	103.0	1.064	1.163	97.8
2011	PENINSULA	109.6	1.179	0.944	93.0
	% Difference	6.4%	10.8%	-18.8%	-4.9%

Per D. 04-10-034
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Pacific Gas and Electric
Division Reliability Indices
2006-2011
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SACRAMENTO	153.0	1.184	1.991	129.2
2007	SACRAMENTO	122.7	0.857	1.162	143.2
2008	SACRAMENTO	180.9	1.168	2.072	154.9
2009	SACRAMENTO	154.2	1.214	1.774	127.0
2010	SACRAMENTO	135.9	0.967	1.281	140.5
5-Yr Ave	06-10 Avg	149.3	1.078	1.656	139.0
2011	SACRAMENTO	169.8	1.154	1.910	147.1
	% Difference	13.7%	7.1%	15.3%	5.9%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SAN FRANCISCO	67.0	0.823	0.275	81.4
2007	SAN FRANCISCO	99.1	1.027	0.386	96.5
2008	SAN FRANCISCO	56.2	0.678	0.271	82.9
2009	SAN FRANCISCO	67.1	0.786	0.096	85.3
2010	SAN FRANCISCO	46.6	0.609	0.077	76.5
5-Yr Ave	06-10 Avg	67.2	0.785	0.221	84.5
2011	SAN FRANCISCO	45.9	0.553	0.215	83.0
	% Difference	-31.7%	-29.5%	-2.7%	-1.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SAN JOSE	84.6	0.802	0.898	105.5
2007	SAN JOSE	99.2	0.944	1.009	105.0
2008	SAN JOSE	91.0	0.794	1.078	114.6
2009	SAN JOSE	76.6	0.779	0.801	98.3
2010	SAN JOSE	70.8	0.765	0.543	92.6
5-Yr Ave	06-10 Avg	84.4	0.817	0.866	103.2
2011	SAN JOSE	111.3	0.965	0.807	115.3
	% Difference	31.8%	18.1%	-6.8%	11.7%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SIERRA	198.4	1.414	0.940	140.3
2007	SIERRA	196.7	1.431	1.684	137.5
2008	SIERRA	243.0	1.630	1.516	149.1
2009	SIERRA	539.7	1.644	1.434	328.4
2010	SIERRA	480.9	1.528	1.214	314.7
5-Yr Ave	06-10 Avg	331.7	1.529	1.358	214.0
2011	SIERRA	808.0	1.948	2.552	414.7
	% Difference	143.6%	27.4%	88.0%	93.8%

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Pacific Gas and Electric
Division Reliability Indices
2006-2011
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SONOMA	192.0	1.488	0.818	129.0
2007	SONOMA	157.6	1.226	1.768	128.5
2008	SONOMA	155.2	1.104	0.922	140.5
2009	SONOMA	167.8	1.205	1.458	139.2
2010	SONOMA	159.5	1.169	0.833	136.4
5-Yr Ave	06-10 Avg	166.4	1.238	1.160	134.7
2011	SONOMA	117.3	0.933	1.393	125.7
	% Difference	-29.5%	-24.7%	20.1%	-6.7%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	STOCKTON	136.9	1.445	2.295	94.8
2007	STOCKTON	183.6	1.636	1.827	112.2
2008	STOCKTON	167.8	1.155	1.800	145.2
2009	STOCKTON	255.5	1.469	2.935	173.9
2010	STOCKTON	283.6	1.395	1.488	203.3
5-Yr Ave	06-10 Avg	205.5	1.420	2.069	145.9
2011	STOCKTON	471.9	1.754	1.188	269.0
	% Difference	129.7%	23.5%	-42.6%	84.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	YOSEMITE	245.3	1.994	2.778	123.0
2007	YOSEMITE	226.5	1.606	1.412	141.1
2008	YOSEMITE	290.4	1.616	1.561	179.7
2009	YOSEMITE	223.9	1.375	1.655	162.9
2010	YOSEMITE	424.4	1.665	2.671	254.9
5-Yr Ave	06-10 Avg	282.1	1.651	2.015	172.3
2011	YOSEMITE	597.2	1.661	2.406	359.5
	% Difference	111.7%	0.6%	19.4%	108.6%
		2.1			
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2006	SYSTEM	156.4	1.292	1.542	121.0
2007	SYSTEM	159.9	1.249	1.565	128.0
2008	SYSTEM	166.7	1.254	1.634	132.9
2009	SYSTEM	163.1	1.193	1.474	136.7
2010	SYSTEM	168.6	1.167	1.311	144.4
5-Yr Ave	06-10 Avg	162.9	1.231	1.505	132.6
2011	SYSTEM	235.9	1.193	1.434	197.8
	% Difference	44.8%	-3.1%	-4.7%	49.2%

SECTION 5

Attachment 2

PG&E Service Territory Map

PG&E Service Territory

SECTION 6

Attachment 3

Summary list of Excludable Major Events per D. 96-09-045

Date	Description	Reason
1/1/2011-1/4/2011	A system of strong storms that began in December 2010 carried through into the beginning of 2011 bringing heavy winds and rain.	Declared State of Emergency
3/17/2011 - 3/22/2011	A series of cold and powerful storms moved through the Service Area with the majority of outages resulting from low snow and gusty winds. The bulk of outage activity occurred overnight Sat 19th to Sun 20th as strong southeasterly wind gusts were observed in many locations (SF Apt 45 mph, Stockton 44 mph, Redding 45 mph, Bakersfield 40 mph). Excessive low elevation snowfall caused significant outage activity. Yosemite Division was hard hit with low snow (snow totals - 38" reported at 4200' above Oakhurst)	Declared State of Emergency
3/24/2011 – 3/27/2011	After a short respite from inclement weather, another strong and cold storm moved into the Service Area on March 24th. Once again, strong southerly wind gusts were observed (SF Apt 38 mph, Oakland 37 mph). Low elevation snow was the main adverse weather issue with Sierra, North Valley, Stockton, and Yosemite Divisions hard hit with low snow. (snow totals - 13" in Shingletown, 25" at 3700' along Highway 88, 34" at the 4200' above Oakhurst)	Declared State of Emergency
1/18/2010 – 1/24/2010	A strong jet stream developed over the Eastern Pacific, which spawned a series of outage producing weather events that included: - Three impulses of strong winds; gust above 50 mph each day (Jan 18, 19, 20) - Periods of moderate to heavy rainfall (Jan 18, 19, 20, 21) - Bands of thundershower activity (several thousand strikes Jan 18-21) - Heavy snowfall at low elevations of the Sierra Nevada (Jan 21, 22)	10% customer criteria
10/13/2009 – 10/14/2009	A strong early season storm affected the entire service area with many stations reporting wind gusts over 50 mph (57 mph at Ft. Funston (SF), 56 mph at Fairfield, 55 mph at Oroville, 51 mph at Monterey). Single day rainfall totals ranged between two and five inches at many locations (4.54 in. at Watsonville, 4.27 in. at Fairfield, and 3.66 in. at Napa). National Weather Service records indicate this storm was the strongest October rain and wind event since 1962.	10% customer criteria
1/3/2008 – 1/6/2008	The strongest storm system since December 1995 affected the entire service area on Jan 4. Wind gusts exceeded 65 mph at many low elevation sites throughout the service area (Redding 70 mph, Beale AFB 69 mph, Sacramento Apt. 66 mph, Pt San Pablo 83 mph), with some coastal hills and foothill sites gusting to over 80 mph (Los Gatos, elev. 2000 ft. 105 mph, Big Rock , Marin Co. elev. 1500 ft. 83 mph). Rainfall totals on Jan 4 ranged up to 4 inches with storm totals above 6 inches in the North Bay counties. Multiple lightning strikes were reported on Jan 4 and 5	10% customer criteria
12/26/06 – 12/28/06	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28.	10% customer criteria
07/21/06 – 07/27/06	A severe and long lasting heat wave affected the service area. In many locations, three day average temperatures were the highest recorded in over 50 years.	Declared State of Emergency
04/04/06 – 04/05/06	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall and moderately gusty winds in the 20-35 mph range.	Declared State of Emergency
03/09/06 – 03/14/06	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area.	Declared State of Emergency
03/02/06 – 03/05/06	During this four day period several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on Mar 3, especially affecting the San Joaquin Valley.	Declared State of Emergency
02/26/06 - 02/28/06	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area.	Declared State of Emergency
01/03/2006 - 01/05/2006 - - - - - - - - - - - - - - - - - 12/30/2005 - 01/02/2006	A series of strong storms struck the service area The Dec 30 event was strongest in the north. The Dec 31 event affected the entire service area. An additional one to three inches of rain fell across northern and central California on Dec 31.	Declared State of Emergency - - - - - - - - - - - - - - - - - 10% customer criteria
12/18/2005 - 12/20/2005	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Many coastal locations received between one to three inches of rain.	Declared State of Emergency
08/11/2004 - 08/16/2004	North Valley Division wildfires.	Declared State of Emergency

12/22/2003	Los Padres Division earthquake.	Declared State of Emergency
12/13/2002 - 12/21/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria
11/07/2002 - 11/08/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria

SECTION 7

Attachment 4

System Indices for the Last 10 Years (2002-2011) Based in IEEE 1366

Table A - IEEE 1366 Method – T&D System

(Excludes 2.5 Beta Days, ISO, Planned and Transformer Only Outages				
YEAR	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
2002	137.4	1.137	2.051	120.8
2003	162.5	1.288	1.745	126.2
2004	152.2	1.179	1.568	129.1
2005	157.0	1.266	1.663	124.0
2006	168.4	1.349	1.573	124.8
2007	142.3	1.199	1.516	118.7
2008	153.4	1.197	1.592	128.1
2009	131.3	1.112	1.391	118.1
2010	127.7	1.097	1.252	116.5
2011	107.4	0.960	1.169	111.9

Table B - IEEE 1366 Method – Distribution System

(Exclude 2.5 Beta Days, ISO, Planned and Transformer Only Outages			
YEAR	**SAIDI**	**SAIFI**	**CAIDI**
2002	127.4	1.049	121.4
2003	147.6	1.173	125.9
2004	140.9	1.074	131.2
2005	137.9	1.120	123.1
2006	151.6	1.196	126.8
2007	128.8	1.089	118.3
2008	137.4	1.101	124.8
2009	121.4	1.027	118.2
2010	115.8	1.000	115.8
2011	96.1	0.863	111.4

Table C - IEEE 1366 Method – Transmission System

(Exclude 2.5 Beta Days, ISO, Planned and Transformer Only Outages			
YEAR	**SAIDI**	**SAIFI**	**CAIDI**
2002	10.0	0.087	114.4
2003	14.9	0.115	129.3
2004	11.0	0.104	106.5
2005	19.1	0.146	130.5
2006	16.7	0.153	109.5
2007	13.5	0.109	123.3
2008	15.8	0.096	163.7
2009	9.9	0.085	117.3
2010	11.9	0.097	123.7
2011	11.2	0.095	117.7

The totals shown in Tables B and C may not exactly match the values in Table A due to the following:

- Generation related outages are included in the first table but not in Tables B and C;
- There are database limitations related to the exclusion process when separating the outage data associated with the transmission and distribution systems.

The MAIFI information is not included in Tables B and C since the existing automatic recording (EON) devices do not distinguish between the two systems.

SECTION 8

Attachment 5

Governor Proclamations

Executive Department

State of California

A PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS due to the destruction caused by a series of severe winter storms, which descended upon California on December 18, 2010, and continued through January 4, 2011, a State of Emergency has been proclaimed to exist in the counties of Inyo, Kern, Kings, Los Angeles, Mariposa, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara and Tulare; and

WHEREAS the effects of these storms continue to threaten the state; and

WHEREAS these severe storms caused harm to people and property, flooded homes and infrastructure, damaged public and private facilities, disrupted roads, impacted agricultural production, and required emergency response and debris clean-up; and

WHEREAS on January 11, 2010, Madera County adopted a resolution proclaiming existence of a local emergency and requested that I proclaim a state of emergency for the county; and

WHEREAS the circumstances of these winter storms, by reason of their magnitude, are or are likely to be beyond the control of the services, personnel, equipment and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property existed due to the winter storms in California.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the state Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code, **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist within Madera County.

Pursuant to this proclamation, I extend the directions, orders and authorities previously granted for the winter storms to Madera County, including those found in Executive Order S-18-10 and assistance under the California Disaster Assistance Act.

I FURTHER DIRECT that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 27 day of January 2011.

Edmund G Brown J

EDMUND G. BROWN JR.
Governor of California

ATTEST:

Debra Bowen

DEBRA BOWEN
Secretary of State

Executive Department
State of California

PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS between March 15 and 27, 2011, a series of severe rainstorms swept across California, bringing high winds and excessive precipitation and flooding; and

WHEREAS these severe storms harmed people and property by damaging public and private facilities, forcing the evacuation of residents, and requiring the opening of emergency shelters; and

WHEREAS these storms caused roads and highways to close as a result of mudflows, debris, floods, and erosion, and also caused a levee to crack; and

WHEREAS these conditions require continuing emergency response, including significant repair and reconstruction work and debris removal; and

WHEREAS the damage caused by this series of storms has impacted numerous California counties, including Alameda, Amador, Butte, Contra Costa, Del Norte, Humboldt, Madera, Mariposa, Mendocino, Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Sierra, Stanislaus, Sutter, Trinity, Tuolumne, and Ventura; and

WHEREAS the circumstances of these storms, by reason of their magnitude, are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property exist due to the storm conditions in the counties of Alameda, Amador, Butte, Contra Costa, Del Norte, Humboldt, Madera, Mariposa, Mendocino, Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Sierra, Stanislaus, Sutter, Trinity, Tuolumne, and Ventura;

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the state Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code, **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist within the counties of Alameda, Amador, Butte, Contra Costa, Del Norte, Humboldt, Madera, Mariposa, Mendocino, Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Sierra, Stanislaus, Sutter, Trinity, Tuolumne, and Ventura.

IT IS HEREBY ORDERED THAT:

1. The California Department of Transportation shall formally request immediate assistance through the Federal Highway Administration's Emergency Relief Program, 23 U.S.C. section 125, in order to obtain federal assistance for critical highway repairs or reconstruction in the affected counties.

2. All agencies of the state government shall use and employ state personnel, equipment and facilities for the performance of any and all activities consistent with the direction of the California Emergency Management Agency and the State Emergency Plan.

I FURTHER DIRECT that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 15th day of April 2011.

EDMUND G. BROWN JR.
Governor of California

ATTEST:

DEBRA BOWEN
Secretary of State

SECTION 9

Attachment 6

Historical (2001-2010) Outage Information from Prior Reports

A. Ten Largest Outage Events

B. Histograms of Events Meeting the CPUC Definition of an Excludable Major Event

C. Customers Experiencing >12 Sustained Outages

Table 4 - Ten Largest 2010 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A strong jet stream developed over the Eastern Pacific, which spawned a series of outage producing weather events that included: - Three impulses of strong winds; gust above 50 mph each day (Jan 18, 19, 20) - Periods of moderate to heavy rainfall (Jan 18, 19, 20, 21) - Bands of thundershower activity (several thousand strikes Jan 18-21) - Heavy snowfall at low elevations of the Sierra Nevada (Jan 21, 22)	Jan 18-24	1,169,513	497	3,830 **	Y
2	A strong storm system with several impulses moved through the entire Service Area during the Dec 17 – 20 period bringing gusty winds and heavy rain. Wind gusts during the period: 43 mph at Stockton, 43 mph at Salinas, 46 mph at SFO, 43 at Red Bluff.	Dec 17-20	215,116	120		N
3	A series of cold storms brought significant snow to low elevations in the Sierra Nevada foothills. The snow came early in the season, when deciduous trees still retained most of their leaves. Excessive snow loading occurred on trees causing large limbs to break off and fall onto power lines. Snowfall amounts ranged from near 1 foot at the 3000' elevation, to several feet above 5000'. This storm produced the most low elevations snow in November in the last 15 years.	Nov 20-21	215,245	186		N
4	Storm system with strong south winds on Dec 28 (gusts to 47 mph at Marysville, 41mph at Stockton, 46 mph SFO) followed by strong northwest winds on Dec 29 (gusts to 46 mph at San Jose, 41 mph at Stockton, 43 at Bakersfield, 46 mph at SFO).	Dec 28-29	180,370	47		N
5	A late season storm brought rain, thunderstorms, and wind. Over 500 lightning strikes were recorded. The storm was particularly strong along the Central Coast and in the southern San Joaquin Valley. Reported wind gusts: 45 mph at Salinas, 46 mph at Santa Maria, 46 mph at Bakersfield 46.	Apr 11-12	122,050	73		N
6	Early season storm brought thunderstorms to Northern Region (over 1000 strikes recorded) along with rain to other parts of the Service Area. In many cases, this was the first rain of the season causing flashover outages.	Sep 8-10	114,402	60		N
7	An early season storm brought high winds and heavy rain to primarily the Northern Region. Redding recorded a peak wind gust of 49 mph. Santa Rosa recorded 4.75" of rainfall.	Oct 24	111,522	43		N
8	Storm system swept across the Service Area bringing rain and gusty winds. Reported wind gusts: 41 mph at Salinas, 41 mph at Bakersfield.	Dec 4-5	98,041	21		N
9	Heat wave conditions resulted in the hottest two days of the summer. Maximum temperatures exceeded 110 in portions of the Central Valley (111 at Bakersfield on 8/25). Maximum temperatures between 100 and 110 were reported both days at many coastal valley areas (109 at Ukiah on 8/25, 107 at Santa Rosa on 8/24, 105 at Livermore on 8/25).	Aug 24-25	97,616	82		N
10	Heat wave affected the service area, on both days Central Valley maximum temperatures ranged between 100 and 110, maximum temperatures above 100 were reported in coastal valleys on 6/27.	Jun 27-28	87,751	38		N

Note:
* Note: Values exclude single distribution line transformer and planned outages
** During the course of the January 18, 2010 Storm approximately 3,830 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, gas service representatives, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 1000 vegetation workers and 60 contract crews (approximately 360 individuals) were utilized to supplement existing resources.

Table 4 - Ten Largest 2009 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A strong early season storm affected the entire service area with many stations reporting wind gusts over 50 mph (57 mph at Ft. Funston (SF), 56 mph at Fairfield, 55 mph at Oroville, 51 mph at Monterey). Single day rainfall totals ranged between two and five inches at many locations (4.54 in. at Watsonville, 4.27 in. at Fairfield, and 3.66 in. at Napa). National Weather Service records indicate this storm was the strongest October rain and wind event since 1962.	10/13–10/14	617,589	244**	4,400 ***	Y
2	A strong cold front produced significant snowfall on Feb. 13 in the 1500-3000 ft. range of the northern and central Sierra foothills (up to 2 feet of snow at 3000 ft. and @ 1 foot at 2000 ft). A second storm followed on Feb.15 producing widespread heavy rain and strong wind gusts to the entire Service Area (67 mph at Valley Ford, 59 mph at Oroville, 50 mph at Redding, and Ft. Funston (SF), 47 mph at Salinas, 43 mph at San Luis Obispo. A third storm on Feb 16 delivered additional rainfall and wind gusts in the 30 to 40 mph range at several locations.	2/13-2/17	340,582	107	Not Requested	N
3	A large cluster of thunderstorms produced widespread lightning activity in the Bay Area and Sacramento Valley on Sep. 12. The lightning activity was followed by a weak weather front the next day that produced the first light rain of the season over much Northern California resulting in flashover related outages.	9/12-9/14	190,671	92	Not Requested	N
4	A strong cold front produced significant snowfall at the 1000-3000 ft. range of the Sierra foothills (up to 2 feet of snow was observed at 3000 ft., @ 1 foot at 1500 ft.) Light snow was reported at locations in the Central Valley.	12/7	147,630	113	Not Requested	N
5	Strong northerly winds developed across the entire Service Area with the gusts in the 45 to 55 mph range in the Bay Area and Sacramento Valley (52 mph at Fairfield, 49 mph at Sacramento, 45 mph at Red Bluff)	11/28	119,504	84	Not Requested	N
6	Strong north to northwest winds in the 40 to 60 mph range followed the passage of a weak weather front through the service area (58 mph at Ft. Funston (SF), 58 mph at SF Airport, 50 mph at San Carlos, 46 mph at Stockton)	4/14	116,406	45	Not Requested	N
7	An area of low pressure produced a large outbreak of thunderstorms with widespread lightning overnight on Jun. 3, continuing into the morning of Jun. 4.	6/3-6/4	98.187	38	Not Requested	N
8	Strong north to northwest winds in the 45 to 55 mph range were recorded throughout the Sacramento and San Joaquin Valleys following the passage of a weak weather front (52 mph at Merced, 49 mph at Stockton, 47 mph at Modesto and Madera, 46 mph at Red Bluff, 45 mph at Fresno).	10/27	70,901	20	Not Requested	N
9	A winter storm accompanied by periods of moderate to heavy rainfall and scattered thundershower activity crossed the service area. Rainfall totals of up to 2 inches were reported.	12/12	54,111	41	Not Requested	N
10	Widespread thunderstorm activity resulted in several hundred lightning strikes in Areas 4, 5, 6 and 7.	5/28	52,705	22	Not Requested	N

Note:

* Values exclude single distribution line transformer and planned outages

** This duration was due to the lack of access caused by flooding in the Stockton area. Access was granted after waters receded. Work was the completed and service was restored to the six customers remaining out of service.

*** Approximately 4,400 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 400 vegetation workers and 42 contract crews (approximately 210 individuals) were utilized to supplement existing resources.

Table 4 - Ten Largest 2008 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Strongest storm system since December 1995 affected the entire service area on Jan 4. Wind gusts exceeded 65 mph at many low elevation sites throughout the service area (Redding 70 mph, Beale AFB 69 mph, Sacramento Apt. 66 mph, Pt San Pablo 83 mph), with some coastal hills and foothill sites gusting to over 80 mph (Los Gatos, elev. 2000 ft. 105 mph, Big Rock , Marin Co. elev. 1500 ft. 83 mph). Rainfall totals on Jan 4 ranged up to 4 inches with storm totals above 6 inches in the North Bay counties. Multiple lightning strikes were reported on Jan 4 and 5.	1/3 – 1/6	1,631,765	290	7,130 **	Y
2	A series of cold winter storms crossed the state. The first system (Jan 24-25) delivered gusty winds (generally in the 30 to 50 mph range), up to 2 inches of rain and snow below 2000 ft. A second system focused on the southern half of the service territory brought additional rain and thundershower activity along with even gustier winds (Santa Maria 67 mph, Bakersfield 49 mph).	1/24 – 1/27	303,168	172	Not Requested	N
3	A storm system with wind gusts in the 25 to 40 mph range crossed the state. Most locations reported under one inch of rain with a few coastal stations reaching two inches total.	10/31 – 11/1	189,811	50	Not Requested	N
4	The first rains of the winter season were accompanied by winds generally gusting from 25 to 35 mph (Red Bluff 44 mph). A large number of flashover incidents were likely triggered by the combination of light rain and power lines heavily sooted after the widespread summer season wildfires.	10/3 – 10/4	147,703	65	Not Requested	N
5	Gusty winds with periods of moderate rain accompanied a weather system that crossed the state. Wind gusts were generally in the 30 to 50 mph range (SF Airport 47 mph, Stockton 47 mph, Merced 45 mph).	2/2 – 2/3	121,865	65	Not Requested	N
6	Gusty winds from this storm were strongest in the southern half of the service area. Gusts between 50 and 55 mph were reported at SF Airport, Salinas, Santa Maria, Red Bluff and Bakersfield.	2/23 – 2/24	113,086	101	Not Requested	N
7	A weather front brought gusty winds and periods of moderate to heavy rain to the state. Post-frontal west to northwest wind gusts were strongest in the Bay Area (SF Apt 54 mph, Hayward 63 mph, Oakland 47 mph, Salinas 51 mph)	12/25	111,134	102	Not Requested	N
8	Gusty north winds generally in the 25 to 35 mph range were reported in the north. San Joaquin and Central Coast winds gusted from 30 to over 50 mph (Santa Maria 41 mph, Stockton 45 mph, Madera 52 mph, Merced 47 mph)	5/22	105, 635	102	Not Requested	N
9	Gusty north winds developed on the evening of Feb 13 and continued through Feb 14. Winds were generally in the 30 to 45 mph range, with strongest gusts in the Central Valley (Redding 48 mph, Marysville 48 mph, Sacramento 47 mph)	2/13 – 2/14	98,788	47	Not Requested	N
10	Gusty north winds between 20 and 35 mph resulted in a record breaking early season heat wave. Bay Area and Central Valley temperatures ranged from 100 to 105F	5/15	84,659	28	Not Requested	N

Note:

* Values exclude single distribution line transformer and planned outages

** Approximately 6,000 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 300-350 vegetation crews (approximately 700 individuals), 70 contract crews (approximately 450 individuals) and 28 mutual assistance crews (approximately 170 individuals) from Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), City of Gridley, City of Redding, and Sierra Pacific Power were utilized to supplement existing resources

Table 4 - Ten Largest 2007 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Gusty winds and rain Feb 26 and 27. Peak wind speeds of 30-45 mph Bay Area (Oakland 40 mph, SF approximately 43 mph). Interior valley reported 25-40 mph gusts, strongest in the San Joaquin Valley (Fresno 38 mph). Rainfall generally below one inch. Snow levels lowered to 2000 ft as far south as the San Joaquin Valley on Feb 27.	2/26 - 2/28	266,764	214 **	Not Requested	N
2	Heat wave centered around July 5. Maximums between 105-115 degrees in the interior valleys, 95-110 degrees in the coastal valleys.	7/4 - 7/7	172,778	20	Not Requested	N
3	Widespread lightning with subtropical rain. Lightning all three days but extensive strikes on Aug 30 over Areas 3 and 4	8/29 - 8/31	149,883	75	Not Requested	N
4	Early summer hot temperatures in the interior; maximums 100-105 degrees in the Central Valley, upper 80's to low 100's in the coastal valleys. North winds 20-25 mph	6/14 - 6/16	137,977	27	Not Requested	N
5	Light rain across Central and North Areas. Winds generally below 25 mph. Lightning on Sep 21 in the evening continuing through Sep 22 mainly in San Joaquin Valley and foothills. Many outages reported due to insulator flashover resulting from light rain.	9/22	100,606	33	Not Requested	N
6	Rain, gusty winds and scattered thundershowers Feb 22. Peak winds at Redding - 51 mph on the Feb 21 and 44 mph on Feb 22nd. Bay Area gusts from 25-35 mph (Oakland 37 mph) on the Feb 22nd. Over 2 inches of rain in Eureka, less than one inch most other locations	2/22 - 2/23	96,420	79	Not Requested	N
7	Light rain far north, winds below 25 mph. Cold morning temperatures.	1/16	91,695	24	Not Requested	N
8	Thunderstorms / lightning in the Sierra foothills of Area 4 and 5. Afternoon temperatures between 95-100 degrees in the Central Valley	7/24	70,602	29	Not Requested	N
9	Light rain across the Service Area. Many outages reported due to insulator flashover resulting from light rain.	10/10	62,434	34	Not Requested	N
10	Moderately strong winds occurred across the Central and Northern Service Areas with gusts up to 50 mph.	12/27	59,594	20	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages
** Note: Reflects an outage at two customer locations in a remote area that experiences deep snow with limited access.

Table 5 - Ten Largest 2006 Outage Events

Rank	Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A severe and long lasting heat wave affected the service area. In many locations three day average temperatures were the highest recorded in over 50 years. Consecutive days with maximum temperatures over 110 F were recorded throughout the Central Valley, and many coastal valleys reported consecutive days with maximum temperatures over 105 F. Sacramento set an all time record of 11 days in a row with maximum temperatures over 100 F. An unusual feature of this heat wave was high nighttime temperatures. Sacramento, San Jose and Fresno set records for the highest minimum temperatures ever recorded.	7/21 - 7/27	651,217	119	Not Requested	Y See Table 4
2	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28. Southerly winds gusted from 45 to 55 mph in the Sacramento Valley and Bay Area on Dec 26th, accompanied by rainfall totals ranging from ½ to 3 inches. Gusty west to northwest winds were recorded after the front passed on Dec 27th. Bay Area wind gusts generally ranged from 45-60 mph, and gusts in the 35 to 50 mph range were reported in both northern and southern portions of the service area. North to northwesterly wind gusts in the 25 to 40 mph range continued into the afternoon of Dec 28th	12/26-12/28	528,496	125	2460	Y See Table 4
3	The storm of Jan 1-2 was a continuation of a series of storms that began at the end of the 2005. Gusts from 45 to over 60 mph were common in the Sacramento Valley and Bay Area; 35 to 55 mph along the Central Coast, and 30 to 45 mph in the San Joaquin Valley. Rainfall amounts ranging from ½ to 2 inches fell on grounds that had been saturated by a series of late December storms.	1/1 – 1/5 (12/30/05 -1/5/06)*	504,072 (1,101,718)	129 (155)	3522**	Y See Table 4
4	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area. Moderate to heavy rain accompanied the strong winds with up to four inches of rain reported along the north coast and in the northern interior. Bands of thunderstorms rolled through the service area on Feb 28.	2/26 – 2/28	331,813	45	Not Requested	Y See Table 4
5	Strong high pressure resulted in heat wave conditions over most of the service area. On June 22, temperatures ranged from 100 to 110 throughout the Central Valley, Bay Area and coastal valley temperatures ranged from 95 to 105. On Jun 23, a weak sea breeze cooled off the Bay Area slightly, but interior valley temperatures continued to climb resulting in readings generally between 105 and 115 through June 25 (117 @ Red Bluff on Jun 25)	6/22 – 6/25	164,582	31	Not Requested	N
6	The first significant wind and rain storm of the winter occurred during the Dec 8-10 period. Wind gusts generally ranged from 30 to 40 mph on Dec 8 and 9 (45 mph @ SF Apt, 45 mph @ Hanford); and from 25-35 mph on Dec 10 (38 mph @ Oakland, 37 mph @ Redding). Rainfall totals were generally under ½ inch on Dec 8 (0,58 at Santa Rosa), between ¼ and ¾ inch on Dec 9 (0.99 inches at Sacramento); and under ¼ inch on Dec 10. Thunderstorms were reported in the Sacramento Valley on Dec 9.	12/8 – 12/10	146,770	39	Not Requested	N
7	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area. On Mar 9, winds gusts ranged from 25 to 45 mph through most of the service area (46 mph @ SF Apt). Lightning mainly confined to coast areas on Mar 10, and coastal areas and San Joaquin Valley on Mar 11. Large accumulations of low elevation snow were reported in the foothills of the Central (10 inches at Angels Camp) and Southern Sierra (14 inches at 1500 ft.). In the coastal mountains between six and 12 inches was reported.	3/9 – 3/14	138,997	94	Not Requested	Y See Table 4
8	During this four day period, several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on March 3, especially affecting the San Joaquin Valley. Fresno reported a wind gust of 41 mph. Wind gusts above 40 mph were recorded in Humboldt County on March 4. The final weather front of this series occurred on Mar 5. Peak winds gusted to 55 mph along the north coast, and an additional one to three inches of rain was reported in parts of the Bay Area, North Coast and Sacramento Valley	3/02 – 3/05	113,235	66	Not Requested	Y See Table 4
9	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall (1.14 inches at Sacramento, 1.02 inches at Stockton) and moderately gusty winds in the 20-35 mph range. Lightning activity was strong in the northern and central San Joaquin Valley.	4/04 – 4/05	102,052	31	Not Requested	Y See Table 4
10	A weather front produced 40-45 mph wind gusts in the northern Sacramento Valley, 10 mph gusts elsewhere. Rainfall totals ranged from ¼ to one inch along the north coast and northern Sacramento Valley, less than ¼ inch elsewhere.	1/28	85,089	73	Not Requested	N

Note: Values exclude single distribution line transformer and planned outages. The events listed as CPUC Major Events only include the outages for excludable counties. otherwise the events include the system values. * The values in parenthesis reflect the totals for the entire event from Dec 30, 2005 to Jan 5, 2006 as noted in Section 1.

**Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 5 - Ten Largest 2005 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A series of strong storms struck the service area (these storms were preceded by several wet events that affected the North Bay and North Coast). The Dec 30 event was strongest in the north. The Eureka NWS office reported 90+ mph winds in the Humboldt Bay area and widespread gusts in excess of 70 mph. Northern Sacramento Valley locations reported strong wind gusts; e.g. 53 mph at Redding. North Coast and North Bay rainfall amounts were in the 3 to 5 inch range. The Dec 31 event affected the entire service area. Wind gusts above 50 mph were recorded in all areas except the Southern San Joaquin Valley; 59 mph at Red Bluff, 58 mph at Arcata, 51 mph at Santa Rosa; 53 mph at Sonoma; 59 mph at Rio vista; 77 mph at Pt San Pablo (SF Bay); 62 mph at Ft. Funston (SF); 60 mph at SF Airport; 52 mph at Los Banos. An additional one to three inches of rain fell across northern and central California on Dec 31.	12/30 – 12/31	597,646	155	3522**	Y
2	A strong weather front delivered wind gusts over 50 mph at many locations in the southern 2/3 of the service area; 53 mph at Beale AFB (Marysville), 53 mph at Mather AFB (Sacramento), 48 mph at SF Airport, 53 mph at Bellota, 51 mph at Stockton, 55 mph at San Luis Obispo, 56 mph at Stockdale (Bakersfield). Rainfall totals were generally less than one inch.	01/07 – 01/09	278,360	149	Not Requested	N
3	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Peak wind gusts included 50 mph at Valley Ford, 49 mph at Rio Vista, 55 mph at Ft. Funston, 53 mph at SF Airport, 49 mph at San Luis Obispo. Many coastal locations received between one to three inches of rain. The number of customer's affected (252,679) is a system total for December 18-20. However, PG&E excluded only the following divisions on the following days: December 18 (Diablo, East Bay, North Bay, North Coast, Peninsula, Sacramento, Stockton), December 19 (North Coast, Peninsula, Sacramento), December 20 (North Coast).	12/18 – 12/20	252,679	49	Not Requested	Y Noted in Table 4
4	A series of weather fronts affected the service area over this four day period resulting in a prolonged period of rainy and blustery weather. Some localized flooding was reported with rainfall totals in the two to four inch range. The strongest winds were on Mar 22 with peak gusts of 45 mph at SF Airport, 45 mph at Rio Vista, 44 mph at Sacramento, 43 mph at Redding and 33 mph at Fresno.	03/19 – 03/22	209,867	55	Not Requested	N
5	A weather front crossed the service area producing strong gusty winds in the Bay Area and Sacramento Valley. Peak gusts included 54 mph at Valley Ford, 51 mph at Table Mountain and Corning, 63 mph at Pt. San Pablo, 51 mph at Pleasanton, 64 mph at SF Airport, and 55 mph at Ft. Funston. Rainfall totals were generally between one and two inches in the North Bay and Sacramento Valley.	12/01 – 12/02	199,923	26	Not Requested	N
6	The series of storms that affected the service area on Dec 26-28 produced moderate rain and gusty winds (30-45 mph) in the north on Dec 26, heavy rain north (one to three inches) and gusty winds south; 44 mph at Stockton, 46 mph Bakersfield, 45 mph Santa Maria on Dec 27, and another one to two inches of rain north on Dec 28.	12/26 – 12/28	124,753	26	Not Requested	N
7	Transmission relay malfunction (Moraga-Oakland Station X, 115kV line #3).	11/20	116,513	9	Not Requested	N
8	A strong lightning storm developed a band of subtropical moisture that mainly affected the Bay Area, southern Sacramento Valley and San Joaquin Valley.	09/20	110,271	41	Not Requested	N
9	A weather front affected the central part of the service area bringing gusty winds and widespread shower activity. Strongest peak wind gusts were 44 mph at Salinas, 40 mph at Pleasanton, 38 mph at Bethel Island and 28 mph at Fresno. Thunderstorm activity was reported in the Bay Area, southern Sacramento Valley, and San Joaquin Valley, with numerous lightning strikes recorded.	02/21	105,652	37	Not Requested	N
10	A weak weather front crossed the service area followed by gusty northwesterly winds. Peak gusts were 37 mph at SF Airport, 36 mph at Eureka, 36 mph at Redding and 36 mph at Rio Vista. Rainfall totals were less than one-half inch.	10/15	85,802	37	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages

**Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 4 - Ten Largest 2004 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Two storms (Oct 17 and 19) moved through the service area. Wind gusts were generally between 24-50 mph (51 mph at Redding, 40 mph at Red Bluff, 37 mph at Napa) on Oct 17, and 35-60 mph on Oct 19 (51 mph Redding, 47 mph at Red Bluff, 51 mph at Marysville, 49 mph at San Francisco Airport, 55 mph at Bellota, 57 mph at San Luis Obispo). Rainfall totals were generally under ½ inch on Oct 17, but ranged from ½ to over 3 inches on Oct 19 (3.30 in. at Redding, 1.90 in. at Ukiah, 1.84 in. at Oakland, 1.89 in. at Santa Rosa)	10/15-10/20	522,213	104	N/A	N
2	A series of wet and windy storms crossed the service area during the last week of 2004. Many northern and central California locations received over 5 inches of rain, with totals above 10 inches at many coastal hill locations. Strong gusty winds, generally in the 25 to 45 mph range were reported on the 27th and early hours of the 28th, especially in the central and southern areas (45 mph at Marysville, 43 mph at Sacramento, 44 mph at Stockton, 46 mph at Santa Maria). Salinas and Ft Funston reported a gusts of 62 and 63 mph, respectively, on the morning of the 27th. The storm of Dec 30th delivered another round of strong winds with gusts generally in the 35 to 55 mph range in northern and central California (53 mph at Red Bluff, 51 mph at Redding, 59 mph at SF Airport, 45 mph at Oakland, 44 mph at Stockton, 39 mph at San Jose).	12/27-12/31	435,315	142	N/A	N
3	A strong weather front with gusty winds and heavy rain crossed the service area. Peak wind gusts in the northern and central portions of the service area generally ranged in the 35 to 65 mph range (58 mph at Arcata, 53 mph at Santa Rosa, 59 mph at Red Bluff, 64 mph at Cohasset, 56 mph at Marysville, 64 mph at Sacramento, 63 mph at San Pablo, 61 mph at Ft Funston, 57 mph at Bellota, 49 mph at Monterey, 49 mph at Templeton). Rainfall totals were generally in the 1-3 inch range, except under 1 inch in the San Joaquin Valley.	2/25-2/26	337,128	54	N/A	N
4	A strong weather front with gusty winds and heavy rain affected the northern half of the service area. Winds gusted from 35 to 65 mph in the Bay Area, Redwood and Northern Interior zones on February 17th (62 mph at SF Airport, 57 mph at Sunol, 50 mph at Pleasanton, 52 mph at Konocti, 45 mph at Santa Rosa, 57 mph at Cohasset, 47 mph at Redding. Rainfall amounts were 3-5 inches in the Redwood zone, 1-4 inches in the Northern Interior and 1-2 inches in the Bay Area.	2/16-2/19	220,162	24	N/A	N
5	A strong weather front with gusty winds and heavy rain affected the northern half of the service area late on Dec 6th and early Dec 7th. Winds gusted from 35 to 60 mph in lower elevation areas of the Redwood, Bay Area and Northern Interior zones, 15-40 mph elsewhere (60 mph at Redding, 51 mph at Valley Ford, 48 mph at Sacramento, 45 mph at Clayton, 47 mph at SF Airport, 49 mph at Ben Lomond, 46 mph at Pleasanton). Rainfall amounts ranged from 1-4 inches at lower elevations, 5-12 inches above 2000 ft elevation, in the northern half of the service area.	12/6-12/8	190,673	35	N/A	N
6	A strong weather front with gusty winds and heavy rain affected the northern half of the service area on Jan 1. Winds gusted from 35 to 60 mph at lower elevations in the Bay Area, Redwood and Northern Interior zones (59 mph at Redding, 56 mph at SF Airport, 54 mph at Sunol, 53 mph at Marysville, 47 mph at Pleasanton, 49 mph at Sacramento, 60 mph at Santa Rosa, 54 mph at Cohasset. Rainfall amounts were 1-3 inches in the Redwood zone, Northern Interior and Bay Area zones.	1/01	172,397	74	N/A	N
7	Gusty north winds developed over northern and central portions of the service area as a strong high pressure system developed. Peak wind speeds included 58 mph at Hopland, 51 mph in Santa Rosa, 47 mph at Sonoma. Peak gusts in the East Bay hills ranged from 50-60 mph	11/20-11/21	118,558	32	N/A	N
8	A moderate weather front, with peak winds of 25-40 mph and accompanied by rainfall totals between ½ and 1 ½ inches, affected the entire service area. Strongest wind gusts were in the northern Sacramento Valley (40 mph at Redding, 38 mph at Red Bluff) and the southern San Joaquin Valley (40 mph at Bakersfield, 38 mph at Hanford).	10/26	74,160	41	N/A	N
9	Transmission substation outage occurred in Central Coast Division.	12/10	61,821	4	N/A	N
10	3rd party dig-in to a transmission line in De Anza division.	10/1	58,591	13	N/A	N

* Note: Values exclude single distribution line transformer and planned outages

Table 4 - Ten Largest 2003 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
1	The first storm system of the fall season moved through the Service Area. Gusty southerly winds up to 30 mph developed in Northern and Central Service Area Zones on the 2nd. Gusty northwest winds occurred on the 4th. Widespread precipitation occurred in the Service Area with totals generally 1" in the mountains and 0.25" in the Central Valley.	11/02 – 11/04	184,849	26	N/A	N
2	A strong winter storm moved through the service area on December 29th. Peak winds ranged from 30 to 70 mph with the strongest gusts north of a Monterey/Madera line. Peak winds included Red Bluff 46 mph, Beale AFB (Marysville) 59 mph, Clayton 47 mph, Sacramento 55 mph, and Stockton 44 mph. One to five inches of rain fell in the northern half of the state. Heavy snowfall was reported at low elevation locations in the northern Sacramento Valley; 18 inches at North Redding, 8-14 inches in downtown Redding, 15 inches at Burney and 10-12 inches at Nevada City.	12/29	164,363	192	N/A	N
3	A strong late winter storm system moved through the Service Area. Two to six inches of precipitation fell in the northern half of the Service Area; 0.50" to 1.5" of precipitation fell in the southern half of the Service Area; the southern half of the state also experienced heavy rains with one to four inches in the LA Basin. Peak wind speeds included 51 mph at Redding; 44 mph at SFO; 40 mph at Sacramento; 35 mph in Fresno; and 31 mph at Santa Rosa. Two to three feet of snowfall was recorded in the Sierra Nevada Mountains at elevations above 5,000" during this three-day period.	03/13 – 03/15	160,863	29	N/A	N
4	A winter storm system moved through the Service Area during this two-day period. One to three inches of precipitation fell over the northern half of the Service Area. Snowfall totals in the northern half of the Sierra Nevada Mountains ranged from one to three feet with 16" at Alpine Meadows; 24" at Soda Springs; and 28" at Sugar Bowl. Peak wind speeds ranged from 20 to 40 mph with 39 mph at SFO; 29 mph at Sacramento and Fresno; and 24 mph at Santa Rosa.	12/09 – 12/10	147,128	144	N/A	N
5	A cold winter storm system moved through the Service Area during this two-day period. Precipitation totals included 2.34" at Redding; 1.38" at Santa Rosa; 0.83" at Sacramento; 0.70" in SFO; and 0.25 at Fresno. The storm was accompanied by numerous thunderstorms and gusty southerly winds, principally on the 8th. Peak wind speeds included 37 mph at SFO; 30 mph in Redding; 26 mph at Sacramento; and 24 mph at Santa Rosa.	11/08 – 11/09	141,666	46	N/A	N
6	A strong winter storm, accompanied by heavy rain and gusty southerly winds, moved through the Service Area. Peak wind speeds ranged from 30 to 65 mph with the strongest gusts in the Bay Area, Redwood Coast, and the Northern Interior. Peak wind speeds included 56 mph in Redding; 53 mph in SFO; 33 mph in Santa Rosa; 30 mph in Sacramento; and 23 mph in Fresno.	12/14	108,910	24	N/A	N
7	A strong earthquake in San Luis Obispo County (Paso Robles).	12/22	107,291	34	N/A	Y
8	The Mission Substation was de-energized due to a fire. The cause of the fire is still under investigation.	12/20	101,534	30	N/A	N
9	A cold, upper level low pressure system moved through the State, accompanied by numerous showers and thundershowers, bringing heavy snow to the mountains Six to ten inches of snow fell in Truckee and the Lake Tahoe Region with up to one and on-half feet recorded at higher elevations. Thunder, lightning and small hail was observed in the Bay Area and in the Central Valley from Red Bluff to Sacramento.	10/31	91,907	21	N/A	N
10	A surge of subtropical moisture resulted in an outbreak of summer season shower and thunderstorm activity through out the Service Area. While precipitation totals were insignificant, there were numerous reports of lightning activity from the evening of the 25th through the evening of the 26th.	08/26	80,159	42	N/A	N

* Note: Values exclude single distribution line transformer and planned outage

Table 4 - Ten Largest 2002 Outage Events

Rank	Description	Date	Number of Customer Interruptions*	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
1	During the December 13-21 storms the highest wind speeds were recorded on December 16 when peak winds ranged from 40 to over 80 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline sites along the North Coast and Bay Area. Peak winds over 40 mph were reported in the San Joaquin Valley on December 19. In the northern half of the service area between 5 and 15 inches of rainfall was reported, with over 20 inches of rain reported at some stations in the coastal hills north of the Bay Area and Northern Sierra foothills.	12/13 –12/21	1,973,806	543	>3,200**	Y
2	During the November 7-8 storms, peak wind speeds ranged from 30 to over 60 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline stations in the Bay Area. Storm rainfall totals generally ranged from one to three inches throughout the service area, with over five inches recorded at some stations in the coastal hills.	11/7 – 11/8	885,431	121	>3,200**	Y
3	A series of storm systems moved through the Service Area during this four day period. These storm systems were accompanied by strong gusty winds, especially on the 28th, late on the 30th, and early on the 31st. Peak wind speeds on the 28th included 54 mph in San Francisco, 44 mph in Oakland, 47 mph in Redding, and 43 mph in Bakersfield. Peak wind speeds on the 31st included 103 mph at Kregor Peak, 72 mph at Las Trampas Ridge, 54 mph in San Francisco, 54 mph in Santa Rosa, 49 mph in Concord, and 46 mph in Redding	12/28 – 12/31	356,505	146	Not Requested	N
4	A heat wave enveloped the entire Service Area beginning on July 8th. Temperatures in the interior valley remained above 100 Deg F through July 15th. The maximum temperatures on the 9th included 92 Deg F in Oakland, 90 in San Francisco, 103 in Santa Rosa, 102 in Concord, 107 in Livermore, 104 in Sacramento, 106 in Fresno. On the 10th, maximum temperatures reached 110 Deg F in Stockton and Sacramento and 115 in Redding. On the 11th, maximum temperatures included 109 in Ukiah, 112 in Redding, 106 in Fresno, and 109 in Bakersfield.	07/09 – 07/11	164,238	46	Not Requested	N
5	A cold front moved through the Service Area on the 14th and 15th accompanied by gusty west and northwest winds. Peak wind speeds included 52 mph in San Francisco, 52 mph at Los Banos, 43 mph in Redding, 41 mph at Stockton, 41 mph in Fresno, and 37 mph in Bakersfield.	04/14 – 04/15	97,105	25	Not Requested	N
6	Gusty north winds developed over northern and central portions of the Service Area as a strong high pressure system moved into the Great Basin. Peak wind speeds included 37 mph in San Francisco, 35 mph in Red Bluff, 38 mph in Redding, and 37 mph in Stockton.	02/28 – 03/01	93,922	44	Not Requested	N
7	An early summer heat wave affected the area with maximum temperatures in the interior valley in the mid-90s to near 100 deg F. Maximum temperatures on the 29th included 96 Deg F in Red Bluff, 95 in Redding, 94 in Stockton, and 94 in Fresno. Maximum temperatures on the 30th included 98 in Redding, 94 in Sacramento, 99 in Stockton, 101 in Fresno, and 99 in Bakersfield.	05/29-05/30	87,244	135	Not Requested	N
8	A Transmission system outage occurred in Diablo division.	11/19	59,023	7 Minutes	Not Requested	N
9	A storm system pushed through the Service Area on the 6th and 7th accompanied by one to two inches of rain and gusty southerly winds. Peak wind speeds included 37 mph in San Francisco, 43 mph in Red Bluff, and 38 mph in Stockton.	03/07	51.847	23	Not Requested	N
10	Gusty north winds occurred in the northern half of the Service Area with 39 mph at Red Bluff, 37 mph at San Francisco, 25 mph at Redding, and 24 mph at Stockton.	03/17	46,065	23	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages. Values reflect all customers in PG&E's service territory affected by outages for those dates.
** Note: Values are estimates of the number of PG&E electric field personnel working. These numbers do not include any non-PG&E personnel.

Table 4 - Ten Largest 2001 Outage Events

Rank	Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
1	Strong early season storm with gusty winds, heavy rains and mountain snows. Many northern and central California weather stations reported wind gusts over 50 mph (e.g. Oroville 54 mph, SF Airport 53 mph, Stockton 58 mph). Most service area locations received over ¾ inch of rain with some 24 hour totals over 2 inches (e.g. 2.25 inches at Concord)	Nov 24	599,915	147	Not Requested	Yes
2	Series of winter storms brought periods of gusty winds, moderate to heavy rain, thunderstorms and low snow levels. Wind gusts between 30-45 mph, 1-2 ft of snow below 3000 ft. Feb 10th, additional snow to 500 ft. in Bay Area. Feb 12th (Mt Hamilton reported 17 inches on the ground). Snow also reported on the Sacramento Valley floor (Red Bluff) and in Eureka on Feb 12th. Rainfall totals ranged from 1-2 inches most areas Feb 10th, with 2-4 inches in the Santa Cruz Mountains. Thunderstorms reported Feb 10, 11th and 12th.	Feb 9-12	284,964	264	Not Requested	No
3	Winter storm with gusty winds, especially along the coast and northern half of service area and central coast. Peak winds between 30 – 60+ mph (59 mph at Redding, 55 mph at SF Airport, 43 mph at Monterey). Total Dec 1-2 rainfall between 2-5 inches at many locations, especially along the coast and Bay Area. Rains fell on near-saturated ground due to frequent preceding storms.	Dec 1	248,475	39	Not Requested	No
4	Winter storm moved through service area bringing periods of heavy rain and gusty winds. Records show this was the first strong storm on the 2000-2001winter season. Wind gusts generally 30 – 50+ mph (52 mph gust at Eureka, 43 mph gust at SF Airport, 70 mph gust at Los Gatos). Rainfall amounts generally 0.5 to 1.5 inches in the northern half of the service area and along the entire coast. Heaviest rain in San Luis Obispo County (2-4 inches).	Jan 10	247,447	37	Not Requested	No
5	Period of intense thunderstorm activity, especially along the coast and coastal valleys. Over 4600 lightning strikes reported, mostly between Monterey and Sonoma Counties. Reports indicate only two other similar lightning events since 1980.	Sep 24-25	234,412	67	Not Requested	No
6	Winter storm with periods of heavy rain and gusty winds, especially in the Sacramento and San Joaquin Valleys (gust to 60 mph Red Bluff, gust to 51 mph at Oroville, gust to 51 mph at Bakersfield). Along the coast from Mendocino county south (gust to 71 mph at Bodega Bay, gust to57 mph at Half Moon Bay, gust to 46 mph at San Luis Obispo). Rainfall ½ to 3+ inches (e.g. 3.01 at San Luis Obispo)	Mar 4	211,452	111	Not Requested	No
7	Storm event on heels of Thanksgiving weekend storm. Strongest winds in the Central Valley. Wind gusts 30 to 50 mph (48 mph at Redding, 49 mph at Oroville, 44 mph at Stockton). Some locations reported over 2 inches of rain (2.52 inches at Santa Rosa, 2.82 inches at Santa Cruz on Nov 29th).	Nov 28-29	166,297	83	Not Requested	No
8	Winter storm with gusty winds and periods of moderate to heavy rain. Wind gusts of 30-40 mph along coast, coast valleys and northern Sacramento Valley (SF Airport gust to 37 mph, Concord gust to 35 mph, Chico gust to 35 mph). Generally ½ to 1 inch rain except ¼ to ½ inch in San Joaquin Valley	Jan 25	143,300	71	Not Requested	No
9	Scattered thunderstorms developed in the Central Valley after the weather front moved through. Wind gusts 20 to 30 mph (gust of 28 mph at Sacramento, gust of 26 mph at Redding, gust of 24 mph at Marysville). Rainfall amounts generally under ½ inch.	Oct 30	122,989	36	Not Requested	No
10	Weather front with wind gusts 20-30 mph (28 mph at Sacramento, 24 mph at Salinas) accompanied by periods of moderate to heavy rain. Scattered thunderstorms reportedly developed behind the front. Rainfall totals of ¾ to 2+ inches reported in the bay Area (2.70 inches Kentfield, 2.09 inches at SF Airport)	Nov 12	78,491	30	Not Requested	No

Note: Values exclude single distribution line transformer and planned outages

Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

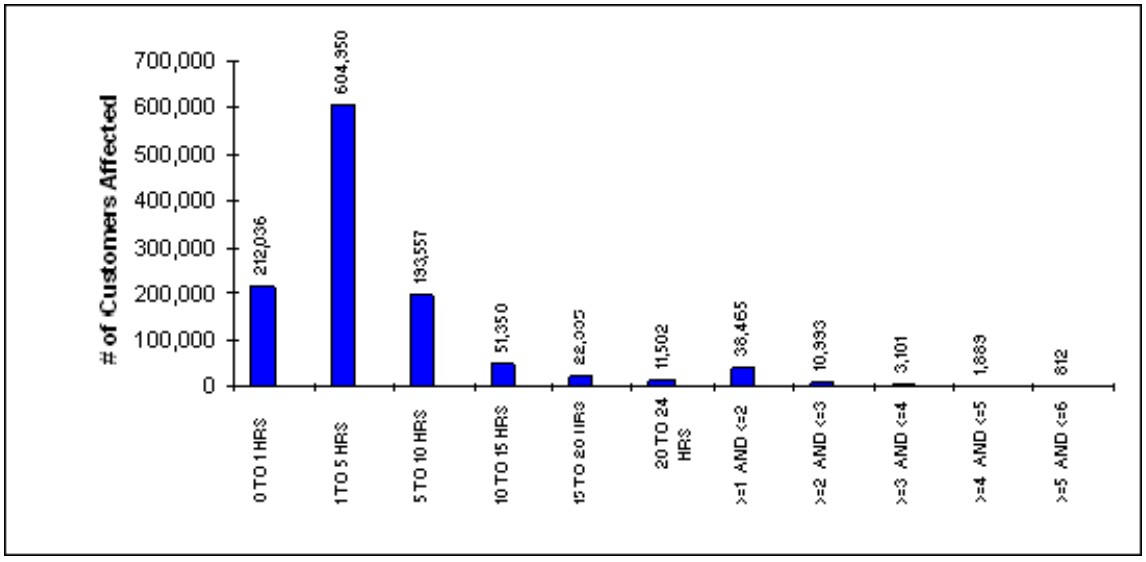
- January 18-24, 2010.

Table 5 below indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%. NOTE: The number of customers affected shown in the histogram below shows 1,153,304 customers, which is 1.4% lower than the 1,169,513 value recorded in PG&E's OUTAGE database.

Table 5 / Figure 1 – 2010 Outage Event Duration Summary

01/18/2010 - 01/24/2010		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	212,036	18.39%
1 TO 5 HRS	604,950	70.84%
5 TO 10 HRS	193,557	87.62%
10 TO 15 HRS	51,350	92.07%
15 TO 20 HRS	22,995	94.07%
20 TO 24 HRS	11,502	95.07%
>=1 AND <=2	38,465	98.40%
>=2 AND <=3	10,993	99.35%
>=3 AND <=4	3,101	99.62%
>=4 AND <=5	1,889	99.79%
>=5 AND <=6	812	99.86%
>=6 AND <=7	245	99.88%
> 7	1,409	100.00%
Total	1,153,304	

Table 5 / Figure 2 – 2010 Outage Event Duration Graph



This storm resulted in 3,147 sustained outages. Approximately 3,830 PG&E employees responded. In addition, approximately 1,360 individuals (vegetation personnel and contract crews) were utilized to supplement the existing resources.

Of the total customers that experienced outages during this seven-day Excludable Major Event, over 95% were restored within 24 hours. Approximately 1.6% of the customers impacted by the storm were without service after 48 hours. This was primarily due to the severity and duration of the storm activity. Restoration to the remaining customers was delayed due to the heavy damage to equipment (poles and conductor) as a result of trees falling on

and through the lines. This was prevalent in the northern and central coast areas. The tables below provide further outage duration detail as well as the damage caused (in term of equipment). .

Table 6 – 2011 Outage Duration Details

	Major Event Days: 1/18/2010 - 1/24/2010			Major Event Days: 1/18/2010 - 1/24/2010			Major Event Days: 1/18/2010 - 1/24/2010	
Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %
0 TO 1 HRS	212,036	18.39%	88 TO 89 HRS	76	99.55%	158 TO 159 HRS	0	99.86%
1 TO 5 HRS	604,950	70.84%	89 TO 90 HRS	143	99.57%	159 TO 160 HRS	0	99.86%
5 TO 10 HRS	193,557	87.62%	90 TO 91 HRS	159	99.58%	160 TO 161 HRS	0	99.86%
10 TO 15 HRS	51,350	92.07%	91 TO 92 HRS	33	99.58%	161 TO 162 HRS	63	99.87%
15 TO 20 HRS	22,995	94.07%	92 TO 93 HRS	0	99.58%	162 TO 163 HRS	0	99.87%
20 TO 24 HRS	11,502	95.07%	93 TO 94 HRS	81	99.59%	163 TO 164 HRS	26	99.87%
24 TO 25 HRS	2,942	95.32%	94 TO 95 HRS	131	99.60%	164 TO 165 HRS	0	99.87%
25 TO 26 HRS	1,705	95.47%	95 TO 96 HRS	242	99.62%	165 TO 166 HRS	61	99.87%
26 TO 27 HRS	3,935	95.81%	96 TO 97 HRS	558	99.67%	166 TO 167 HRS	25	99.88%
27 TO 28 HRS	3,071	96.08%	97 TO 98 HRS	28	99.67%	167 TO 168 HRS	14	99.88%
28 TO 29 HRS	3,139	96.35%	98 TO 99 HRS	10	99.67%	168 TO 169 HRS	145	99.89%
29 TO 30 HRS	3,508	96.65%	99 TO 100 HRS	39	99.68%	169 TO 170 HRS	0	99.89%
30 TO 31 HRS	1,345	96.77%	100 TO 101 HRS	22	99.68%	170 TO 171 HRS	7	99.89%
31 TO 32 HRS	1,630	96.91%	101 TO 102 HRS	301	99.71%	171 TO 172 HRS	423	99.93%
32 TO 33 HRS	1,818	97.07%	102 TO 103 HRS	194	99.72%	172 TO 173 HRS	0	99.93%
33 TO 34 HRS	2,557	97.29%	103 TO 104 HRS	110	99.73%	173 TO 174 HRS	0	99.93%
34 TO 35 HRS	877	97.37%	104 TO 105 HRS	10	99.73%	174 TO 175 HRS	26	99.93%
35 TO 36 HRS	1,031	97.45%	105 TO 106 HRS	0	99.73%	175 TO 176 HRS	0	99.93%
36 TO 37 HRS	1,430	97.58%	106 TO 107 HRS	0	99.73%	176 TO 177 HRS	0	99.93%
37 TO 38 HRS	1,119	97.68%	107 TO 108 HRS	96	99.74%	177 TO 178 HRS	0	99.93%
38 TO 39 HRS	773	97.74%	108 TO 109 HRS	4	99.74%	178 TO 179 HRS	2	99.93%
39 TO 40 HRS	1,221	97.85%	109 TO 110 HRS	108	99.75%	179 TO 180 HRS	0	99.93%
40 TO 41 HRS	653	97.91%	110 TO 111 HRS	0	99.75%	180 TO 181 HRS	0	99.93%
41 TO 42 HRS	552	97.95%	111 TO 112 HRS	0	99.75%	181 TO 182 HRS	0	99.93%
42 TO 43 HRS	1,837	98.11%	112 TO 113 HRS	0	99.75%	182 TO 183 HRS	0	99.93%
43 TO 44 HRS	902	98.19%	113 TO 114 HRS	8	99.75%	183 TO 184 HRS	0	99.93%
44 TO 45 HRS	243	98.21%	114 TO 115 HRS	230	99.77%	184 TO 185 HRS	0	99.93%
45 TO 46 HRS	309	98.24%	115 TO 116 HRS	145	99.78%	185 TO 186 HRS	0	99.93%
46 TO 47 HRS	1,181	98.34%	116 TO 117 HRS	0	99.78%	186 TO 187 HRS	0	99.93%
47 TO 48 HRS	687	98.40%	117 TO 118 HRS	12	99.78%	187 TO 188 HRS	0	99.93%
48 TO 49 HRS	358	98.43%	118 TO 119 HRS	8	99.79%	188 TO 189 HRS	0	99.93%
49 TO 50 HRS	355	98.46%	119 TO 120 HRS	6	99.79%	189 TO 190 HRS	0	99.93%
50 TO 51 HRS	839	98.53%	120 TO 121 HRS	16	99.79%	190 TO 191 HRS	0	99.93%
51 TO 52 HRS	675	98.59%	121 TO 122 HRS	11	99.79%	191 TO 192 HRS	0	99.93%
52 TO 53 HRS	293	98.62%	122 TO 123 HRS	156	99.80%	192 TO 193 HRS	0	99.93%
53 TO 54 HRS	198	98.64%	123 TO 124 HRS	1	99.80%	193 TO 194 HRS	0	99.93%
54 TO 55 HRS	1,481	98.76%	124 TO 125 HRS	8	99.80%	194 TO 195 HRS	0	99.93%
55 TO 56 HRS	1,226	98.87%	125 TO 126 HRS	84	99.81%	195 TO 196 HRS	0	99.93%
56 TO 57 HRS	157	98.88%	126 TO 127 HRS	0	99.81%	196 TO 197 HRS	0	99.93%
57 TO 58 HRS	674	98.94%	127 TO 128 HRS	58	99.82%	197 TO 198 HRS	0	99.93%
58 TO 59 HRS	956	99.03%	128 TO 129 HRS	34	99.82%	198 TO 199 HRS	7	99.93%
59 TO 60 HRS	273	99.05%	129 TO 130 HRS	7	99.82%	199 TO 200 HRS	0	99.93%
60 TO 61 HRS	839	99.12%	130 TO 131 HRS	0	99.82%	200 TO 201 HRS	0	99.93%
61 TO 62 HRS	158	99.14%	131 TO 132 HRS	3	99.82%	201 TO 202 HRS	3	99.93%
62 TO 63 HRS	655	99.19%	132 TO 133 HRS	0	99.82%	202 TO 203 HRS	115	99.94%
63 TO 64 HRS	459	99.23%	133 TO 134 HRS	29	99.82%	203 TO 204 HRS	0	99.94%
64 TO 65 HRS	273	99.26%	134 TO 135 HRS	0	99.82%	204 TO 205 HRS	0	99.94%
65 TO 66 HRS	240	99.28%	135 TO 136 HRS	98	99.83%	205 TO 206 HRS	0	99.94%
66 TO 67 HRS	325	99.31%	136 TO 137 HRS	19	99.83%	206 TO 207 HRS	0	99.94%
67 TO 68 HRS	68	99.31%	137 TO 138 HRS	16	99.83%	207 TO 208 HRS	321	99.97%
68 TO 69 HRS	51	99.32%	138 TO 139 HRS	136	99.84%	208 TO 209 HRS	0	99.97%
69 TO 70 HRS	126	99.33%	139 TO 140 HRS	0	99.84%	209 TO 210 HRS	166	99.98%
70 TO 71 HRS	57	99.33%	140 TO 141 HRS	36	99.85%	210 TO 269 HRS	0	99.98%
71 TO 72 HRS	257	99.35%	141 TO 142 HRS	8	99.85%	269 TO 270 HRS	0	99.98%
72 TO 73 HRS	46	99.36%	142 TO 143 HRS	0	99.85%	270 TO 271 HRS	0	99.98%
73 TO 74 HRS	218	99.38%	143 TO 144 HRS	92	99.86%	271 TO 272 HRS	53	99.99%
74 TO 75 HRS	17	99.38%	144 TO 145 HRS	8	99.86%	272 TO 273 HRS	0	99.99%
75 TO 76 HRS	22	99.38%	145 TO 146 HRS	13	99.86%	273 TO 274 HRS	0	99.99%
76 TO 77 HRS	15	99.38%	146 TO 147 HRS	35	99.86%	274 TO 275 HRS	0	99.99%
77 TO 78 HRS	46	99.39%	147 TO 148 HRS	0	99.86%	275 TO 276 HRS	0	99.99%
78 TO 79 HRS	74	99.39%	148 TO 149 HRS	0	99.86%	276 TO 277 HRS	0	99.99%
79 TO 80 HRS	213	99.41%	149 TO 150 HRS	0	99.86%	277 TO 278 HRS	0	99.99%
80 TO 81 HRS	86	99.42%	150 TO 151 HRS	0	99.86%	278 TO 279 HRS	0	99.99%
81 TO 82 HRS	169	99.43%	151 TO 152 HRS	0	99.86%	279 TO 280 HRS	0	99.99%
82 TO 83 HRS	123	99.44%	152 TO 153 HRS	0	99.86%	280 TO 281 HRS	0	99.99%
83 TO 84 HRS	0	99.44%	153 TO 154 HRS	0	99.86%	281 TO 282 HRS	2	99.99%
84 TO 85 HRS	52	99.45%	154 TO 155 HRS	0	99.86%	282 TO 296 HRS	0	99.99%
85 TO 86 HRS	294	99.47%	155 TO 156 HRS	0	99.86%	296 TO 297 HRS	0	99.99%
86 TO 87 HRS	102	99.48%	156 TO 157 HRS	0	99.86%	297 TO 298 HRS	0	99.99%
87 TO 88 HRS	759	99.55%	157 TO 158 HRS	0	99.86%	298 TO 299 HRS	125	100.00%
						299 TO 300 HRS	0	100.00%
						300 TO 495 HRS	0	100.00%
						495 TO 496 HRS	0	100.00%
						496 TO 497 HRS	14	100.00%
						497 TO 498 HRS	0	100.00%
						498 TO 499 HRS	0	100.00%
						499 TO 500 HRS	0	100.00%
						> 500 HRS	0	100.00%
						Total	1,153,304	

Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

- October 13-14, 2009.

The Table 5 below indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%. NOTE: The number of customers affected shown in the histogram below shows 612,019 customers, which is 0.9% lower than the 617,589 value recorded in PG&E's OUTAGE database.

Table 5 / Figure 1 – 2009 Outage Event Duration Summary

10/13/2009 - 10/14/2009		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	81,010	13.2%
1 TO 5 HRS	315,520	64.8%
5 TO 10 HRS	99,270	81.0%
10 TO 15 HRS	38,176	87.2%
15 TO 20 HRS	25,305	91.4%
20 TO 24 HRS	16,424	94.1%
>=1 AND <=2	33,179	99.5%
>=2 AND <=3	2,876	100.0%
>=3 AND <=4	253	100.0%
>=4 AND <=5	0	100.0%
>=5 AND <=6	0	100.0%
>=6 AND <=7	0	100.0%
> 7	6	100.0%
Total	612,019	

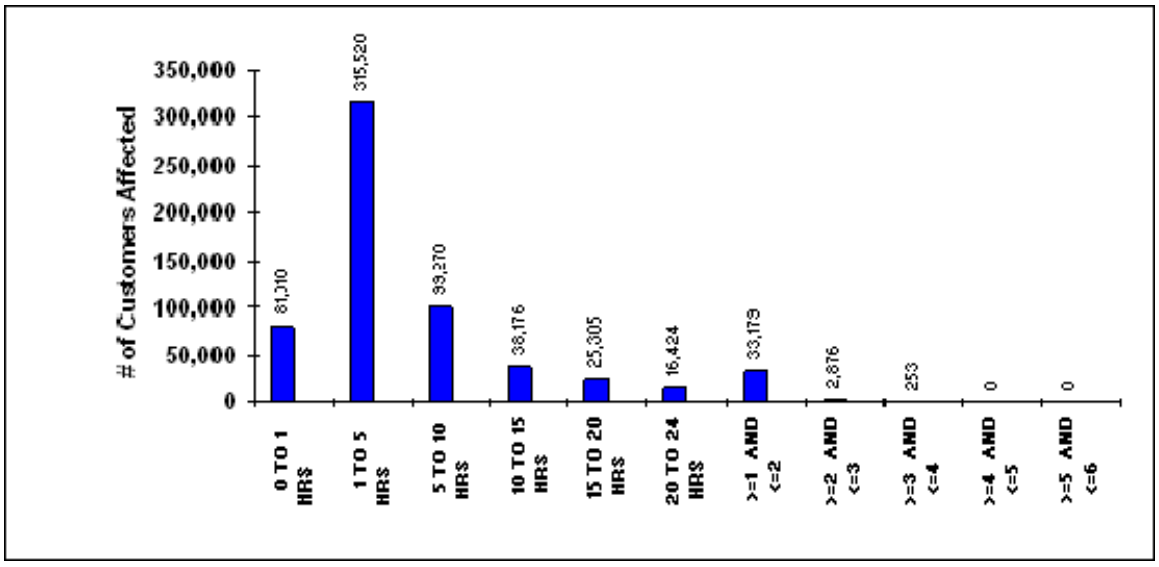


Table 6 – 2009 Outage Duration Details

Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %
0 TO 1 HRS	81,010	13.24%
1 TO 5 HRS	315,520	64.79%
5 TO 10 HRS	99,270	81.01%
10 TO 15 HRS	38,176	87.25%
15 TO 20 HRS	25,305	91.38%
20 TO 24 HRS	16,424	94.07%
24 TO 25 HRS	3,429	94.63%
25 TO 26 HRS	2,199	94.99%
26 TO 27 HRS	2,235	95.35%
27 TO 28 HRS	1,857	95.65%
28 TO 29 HRS	3,381	96.21%
29 TO 30 HRS	804	96.34%
30 TO 31 HRS	1,289	96.55%
31 TO 32 HRS	2,790	97.00%
32 TO 33 HRS	2,449	97.41%
33 TO 34 HRS	1,244	97.61%
34 TO 35 HRS	592	97.71%
35 TO 36 HRS	1,558	97.96%
36 TO 37 HRS	544	98.05%
37 TO 38 HRS	4,407	98.77%
38 TO 39 HRS	98	98.78%
39 TO 40 HRS	418	98.85%
40 TO 41 HRS	487	98.93%
41 TO 42 HRS	958	99.09%
42 TO 43 HRS	109	99.11%
43 TO 44 HRS	364	99.17%
44 TO 45 HRS	661	99.27%
45 TO 46 HRS	120	99.29%
46 TO 47 HRS	640	99.40%
47 TO 48 HRS	546	99.49%

Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %
48 TO 49 HRS	211	99.52%
49 TO 50 HRS	336	99.58%
50 TO 51 HRS	599	99.68%
51 TO 52 HRS	133	99.70%
52 TO 53 HRS	175	99.73%
53 TO 54 HRS	20	99.73%
54 TO 55 HRS	114	99.75%
55 TO 56 HRS	312	99.80%
56 TO 57 HRS	181	99.83%
57 TO 58 HRS	149	99.85%
58 TO 59 HRS	156	99.88%
59 TO 60 HRS	37	99.88%
60 TO 61 HRS	2	99.88%
61 TO 62 HRS	19	99.89%
62 TO 63 HRS	29	99.89%
63 TO 64 HRS	8	99.89%
64 TO 65 HRS	72	99.90%
65 TO 66 HRS	76	99.92%
66 TO 67 HRS	5	99.92%
67 TO 68 HRS	0	99.92%
68 TO 69 HRS	13	99.92%
69 TO 70 HRS	57	99.93%
70 TO 71 HRS	139	99.95%
71 TO 72 HRS	33	99.96%
72 TO 73 HRS	29	99.96%
73 TO 74 HRS	71	99.97%
74 TO 75 HRS	15	99.98%
75 TO 76 HRS	2	99.98%
76 TO 77 HRS	70	99.99%
77 TO 78 HRS	55	100.00%

Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %
78 TO 79 HRS	0	100.00%
79 TO 80 HRS	9	100.00%
80 TO 81 HRS	2	100.00%
81 TO 82 HRS	0	100.00%
82 TO 83 HRS	0	100.00%
83 TO 84 HRS	0	100.00%
84 TO 85 HRS	0	100.00%
85 TO 86 HRS	0	100.00%
86 TO 87 HRS	0	100.00%
87 TO 88 HRS	0	100.00%
88 TO 89 HRS	0	100.00%
89 TO 90 HRS	0	100.00%
90 TO 91 HRS	0	100.00%
91 TO 92 HRS	0	100.00%
92 TO 93 HRS	0	100.00%
93 TO 94 HRS	0	100.00%
94 TO 95 HRS	0	100.00%
95 TO 96 HRS	0	100.00%
96 TO 97 HRS	0	100.00%
97 TO 98 HRS	0	100.00%
98 TO 99 HRS	0	100.00%
99 TO 100 HRS	0	100.00%
100 TO 101 HRS	0	100.00%
101 TO 102 HRS	0	100.00%
102 TO 103 HRS	0	100.00%
103 TO 104 HRS	0	100.00%
104 TO 105 HRS	0	100.00%
105 TO 106 HRS	0	100.00%
106 TO 107 HRS	0	100.00%
107 TO 108 HRS	0	100.00%
108 TO 109 HRS	0	100.00%
109 TO 110 HRS	0	100.00%
> 110 HRS	0	100.00%
Total	612,019	

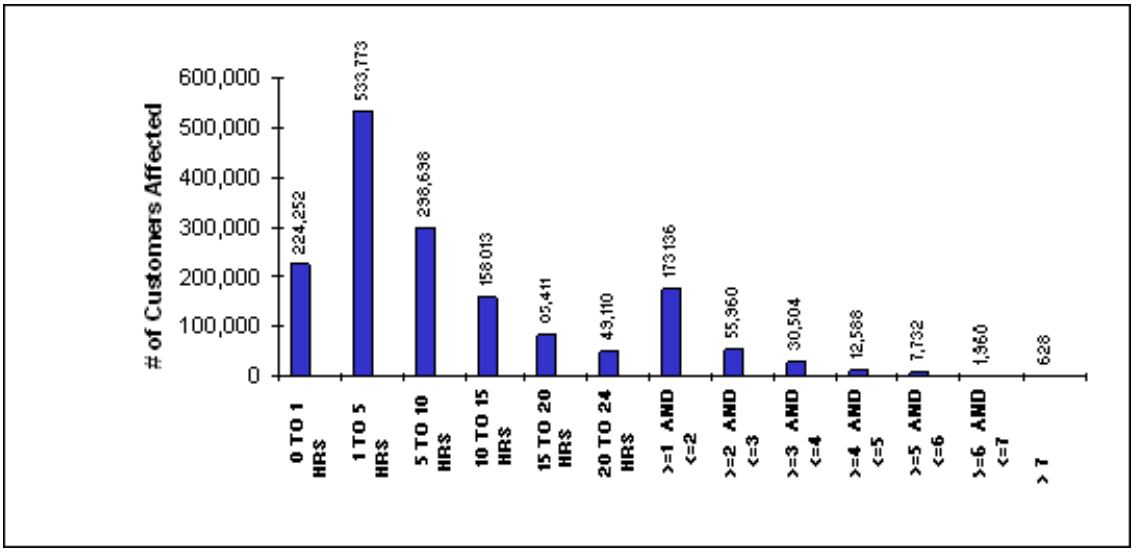
Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

- January 3-6, 2008.

The following table in this section indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Table 5 / Figure 1 – 2008 Outage Event Duration Summary

01/03/08 - 01/06/08		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	224,252	13.74%
1 TO 5 HRS	533,773	46.45%
5 TO 10 HRS	298,698	64.76%
10 TO 15 HRS	158,013	74.44%
15 TO 20 HRS	85,411	79.68%
20 TO 24 HRS	49,110	82.69%
>=1 AND <=2	173,136	93.30%
>=2 AND <=3	55,960	96.73%
>=3 AND <=4	30,504	98.60%
>=4 AND <=5	12,588	99.37%
>=5 AND <=6	7,732	99.84%
>=6 AND <=7	1,960	99.96%
> 7	628	100.00%
Total	1,631,765	



	Major Event Days: 1/3/08 - 1/6/08										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	224,236	13.95%	93 TO 94 HRS	646	100.04%	168 TO 169 HRS	65	101.47%	243 TO 244 HRS	0	101.50%
1 TO 5 HRS	533,675	47.15%	94 TO 95 HRS	295	100.06%	169 TO 170 HRS	27	101.47%	244 TO 245 HRS	0	101.50%
5 TO 10 HRS	298,692	65.73%	95 TO 96 HRS	304	100.08%	170 TO 171 HRS	13	101.47%	245 TO 246 HRS	0	101.50%
10 TO 15 HRS	158,001	75.56%	96 TO 97 HRS	247	100.09%	171 TO 172 HRS	0	101.47%	246 TO 247 HRS	0	101.50%
15 TO 20 HRS	85,407	80.88%	97 TO 98 HRS	636	100.13%	172 TO 173 HRS	13	101.47%	247 TO 248 HRS	0	101.50%
20 TO 24 HRS	49,085	83.93%	98 TO 99 HRS	1,253	100.21%	173 TO 174 HRS	2	101.47%	248 TO 249 HRS	0	101.50%
24 TO 25 HRS	14,291	84.82%	99 TO 100 HRS	656	100.25%	174 TO 175 HRS	8	101.47%	249 TO 250 HRS	0	101.50%
25 TO 26 HRS	7,281	85.27%	100 TO 101 HRS	1,052	100.32%	175 TO 176 HRS	6	101.47%	250 TO 251 HRS	0	101.50%
26 TO 27 HRS	16,482	86.30%	101 TO 102 HRS	1,546	100.41%	176 TO 177 HRS	38	101.47%	251 TO 252 HRS	0	101.50%
27 TO 28 HRS	11,957	87.04%	102 TO 103 HRS	676	100.45%	177 TO 178 HRS	0	101.47%	252 TO 253 HRS	0	101.50%
28 TO 29 HRS	16,705	88.08%	103 TO 104 HRS	820	100.51%	178 TO 179 HRS	0	101.47%	253 TO 254 HRS	0	101.50%
29 TO 30 HRS	7,478	88.54%	104 TO 105 HRS	691	100.55%	179 TO 180 HRS	0	101.47%	254 TO 255 HRS	0	101.50%
30 TO 31 HRS	14,566	89.45%	105 TO 106 HRS	501	100.58%	180 TO 181 HRS	0	101.47%	255 TO 256 HRS	0	101.50%
31 TO 32 HRS	8,893	90.00%	106 TO 107 HRS	594	100.62%	181 TO 182 HRS	32	101.48%	256 TO 257 HRS	0	101.50%
32 TO 33 HRS	6,934	90.44%	107 TO 108 HRS	820	100.67%	182 TO 183 HRS	0	101.48%	257 TO 258 HRS	0	101.50%
33 TO 34 HRS	5,724	90.79%	108 TO 109 HRS	230	100.68%	183 TO 184 HRS	0	101.48%	258 TO 259 HRS	0	101.50%
34 TO 35 HRS	6,208	91.18%	109 TO 110 HRS	231	100.70%	184 TO 185 HRS	0	101.48%	259 TO 260 HRS	46	101.50%
35 TO 36 HRS	7,496	91.64%	110 TO 111 HRS	204	100.71%	185 TO 186 HRS	4	101.48%	260 TO 261 HRS	0	101.50%
36 TO 37 HRS	8,359	92.16%	111 TO 112 HRS	356	100.73%	186 TO 187 HRS	2	101.48%	261 TO 262 HRS	0	101.50%
37 TO 38 HRS	8,046	92.66%	112 TO 113 HRS	423	100.76%	187 TO 188 HRS	0	101.48%	262 TO 263 HRS	38	101.50%
38 TO 39 HRS	6,875	93.09%	113 TO 114 HRS	148	100.77%	188 TO 189 HRS	0	101.48%	263 TO 264 HRS	0	101.50%
39 TO 40 HRS	3,971	93.34%	114 TO 115 HRS	117	100.77%	189 TO 190 HRS	0	101.48%	264 TO 265 HRS	0	101.50%
40 TO 41 HRS	2,213	93.48%	115 TO 116 HRS	107	100.78%	190 TO 191 HRS	0	101.48%	265 TO 266 HRS	0	101.50%
41 TO 42 HRS	4,531	93.76%	116 TO 117 HRS	544	100.81%	191 TO 192 HRS	135	101.48%	266 TO 267 HRS	0	101.50%
42 TO 43 HRS	4,518	94.04%	117 TO 118 HRS	61	100.82%	192 TO 193 HRS	0	101.48%	267 TO 268 HRS	0	101.50%
43 TO 44 HRS	3,409	94.25%	118 TO 119 HRS	105	100.83%	193 TO 194 HRS	0	101.48%	268 TO 269 HRS	0	101.50%
44 TO 45 HRS	729	94.30%	119 TO 120 HRS	570	100.86%	194 TO 195 HRS	12	101.48%	269 TO 270 HRS	0	101.50%
45 TO 46 HRS	833	94.35%	120 TO 121 HRS	614	100.90%	195 TO 196 HRS	26	101.49%	270 TO 271 HRS	0	101.50%
46 TO 47 HRS	3,037	94.54%	121 TO 122 HRS	277	100.92%	196 TO 197 HRS	21	101.49%	271 TO 272 HRS	0	101.50%
47 TO 48 HRS	2,579	94.70%	122 TO 123 HRS	335	100.94%	197 TO 198 HRS	0	101.49%	272 TO 273 HRS	0	101.50%
48 TO 49 HRS	2,952	94.88%	123 TO 124 HRS	142	100.95%	198 TO 199 HRS	26	101.49%	273 TO 274 HRS	0	101.50%
49 TO 50 HRS	1,297	94.96%	124 TO 125 HRS	592	100.98%	199 TO 200 HRS	1	101.49%	274 TO 275 HRS	0	101.50%
50 TO 51 HRS	1,575	95.06%	125 TO 126 HRS	518	101.01%	200 TO 201 HRS	0	101.49%	275 TO 276 HRS	0	101.50%
51 TO 52 HRS	3,236	95.26%	126 TO 127 HRS	503	101.05%	201 TO 202 HRS	27	101.49%	276 TO 277 HRS	0	101.50%
52 TO 53 HRS	5,199	95.59%	127 TO 128 HRS	341	101.07%	202 TO 203 HRS	0	101.49%	277 TO 278 HRS	0	101.50%
53 TO 54 HRS	3,310	95.79%	128 TO 129 HRS	545	101.10%	203 TO 204 HRS	0	101.49%	278 TO 279 HRS	0	101.50%
54 TO 55 HRS	5,085	96.11%	129 TO 130 HRS	186	101.11%	204 TO 205 HRS	4	101.49%	279 TO 280 HRS	0	101.50%
55 TO 56 HRS	4,535	96.39%	130 TO 131 HRS	264	101.13%	205 TO 206 HRS	0	101.49%	280 TO 281 HRS	0	101.50%
56 TO 57 HRS	2,805	96.56%	131 TO 132 HRS	551	101.16%	206 TO 207 HRS	0	101.49%	281 TO 282 HRS	0	101.50%
57 TO 58 HRS	1,906	96.68%	132 TO 133 HRS	42	101.17%	207 TO 208 HRS	0	101.49%	282 TO 283 HRS	0	101.50%
58 TO 59 HRS	4,303	96.95%	133 TO 134 HRS	527	101.20%	208 TO 209 HRS	0	101.49%	283 TO 284 HRS	0	101.50%
59 TO 60 HRS	2,836	97.13%	134 TO 135 HRS	130	101.21%	209 TO 210 HRS	0	101.49%	284 TO 285 HRS	0	101.50%
60 TO 61 HRS	808	97.18%	135 TO 136 HRS	433	101.23%	210 TO 211 HRS	0	101.49%	285 TO 286 HRS	0	101.50%
61 TO 62 HRS	1,356	97.26%	136 TO 137 HRS	281	101.25%	211 TO 212 HRS	0	101.49%	286 TO 287 HRS	0	101.50%
62 TO 63 HRS	2,156	97.40%	137 TO 138 HRS	282	101.27%	212 TO 213 HRS	0	101.49%	287 TO 288 HRS	0	101.50%
63 TO 64 HRS	1,445	97.49%	138 TO 139 HRS	427	101.30%	213 TO 214 HRS	0	101.49%	288 TO 289 HRS	0	101.50%
64 TO 65 HRS	1,487	97.58%	139 TO 140 HRS	3	101.30%	214 TO 215 HRS	33	101.49%	289 TO 290 HRS	8	101.50%
65 TO 66 HRS	1,223	97.65%	140 TO 141 HRS	114	101.30%	215 TO 216 HRS	0	101.49%	290 TO 291 HRS	0	101.50%
66 TO 67 HRS	3,131	97.85%	141 TO 142 HRS	105	101.31%	216 TO 217 HRS	0	101.49%	291 TO 292 HRS	0	101.50%
67 TO 68 HRS	741	97.90%	142 TO 143 HRS	51	101.31%	217 TO 218 HRS	0	101.49%	292 TO 293 HRS	0	101.50%
68 TO 69 HRS	1,066	97.96%	143 TO 144 HRS	455	101.34%	218 TO 219 HRS	0	101.49%	293 TO 294 HRS	0	101.50%
69 TO 70 HRS	1,431	98.05%	144 TO 145 HRS	117	101.35%	219 TO 220 HRS	0	101.49%	294 TO 295 HRS	0	101.50%
70 TO 71 HRS	621	98.09%	145 TO 146 HRS	20	101.35%	220 TO 221 HRS	0	101.49%	295 TO 296 HRS	0	101.50%
71 TO 72 HRS	1,452	98.18%	146 TO 147 HRS	127	101.36%	221 TO 222 HRS	0	101.49%	296 TO 297 HRS	0	101.50%
72 TO 73 HRS	1,002	98.24%	147 TO 148 HRS	107	101.36%	222 TO 223 HRS	0	101.49%	297 TO 298 HRS	0	101.50%
73 TO 74 HRS	866	98.30%	148 TO 149 HRS	123	101.37%	223 TO 224 HRS	0	101.49%	298 TO 299 HRS	0	101.50%
74 TO 75 HRS	2,047	98.42%	149 TO 150 HRS	371	101.39%	224 TO 225 HRS	0	101.49%	299 TO 300 HRS	0	101.50%
75 TO 76 HRS	2,303	98.57%	150 TO 151 HRS	527	101.43%	225 TO 226 HRS	0	101.49%	> 300 HRS	0	101.50%
76 TO 77 HRS	2,170	98.70%	151 TO 152 HRS	68	101.43%	226 TO 227 HRS	0	101.49%	Total	1,607,425	
77 TO 78 HRS	1,863	98.82%	152 TO 153 HRS	171	101.44%	227 TO 228 HRS	0	101.49%			
78 TO 79 HRS	2,916	99.00%	153 TO 154 HRS	53	101.45%	228 TO 229 HRS	0	101.49%			
79 TO 80 HRS	1,867	99.12%	154 TO 155 HRS	78	101.45%	229 TO 230 HRS	0	101.49%			
80 TO 81 HRS	1,198	99.19%	155 TO 156 HRS	31	101.45%	230 TO 231 HRS	0	101.49%			
81 TO 82 HRS	2,400	99.34%	156 TO 157 HRS	36	101.45%	231 TO 232 HRS	0	101.49%			
82 TO 83 HRS	1,610	99.44%	157 TO 158 HRS	3	101.45%	232 TO 233 HRS	0	101.49%			
83 TO 84 HRS	1,655	99.54%	158 TO 159 HRS	20	101.46%	233 TO 234 HRS	0	101.49%			
84 TO 85 HRS	766	99.59%	159 TO 160 HRS	40	101.46%	234 TO 235 HRS	0	101.49%			
85 TO 86 HRS	1,178	99.66%	160 TO 161 HRS	20	101.46%	235 TO 236 HRS	39	101.50%			
86 TO 87 HRS	2,437	99.81%	161 TO 162 HRS	0	101.46%	236 TO 237 HRS	2	101.50%			
87 TO 88 HRS	547	99.85%	162 TO 163 HRS	0	101.46%	237 TO 238 HRS	0	101.50%			
88 TO 89 HRS	920	99.91%	163 TO 164 HRS	7	101.46%	238 TO 239 HRS	0	101.50%			
89 TO 90 HRS	232	99.92%	164 TO 165 HRS	0	101.46%	239 TO 240 HRS	0	101.50%			
90 TO 91 HRS	563	99.96%	165 TO 166 HRS	9	101.46%	240 TO 241 HRS	0	101.50%			
91 TO 92 HRS	434	99.98%	166 TO 167 HRS	1	101.46%	241 TO 242 HRS	0	101.50%			
92 TO 93 HRS	284	100.00%	167 TO 168 HRS	31	101.46%	242 TO 243 HRS	0	101.50%			

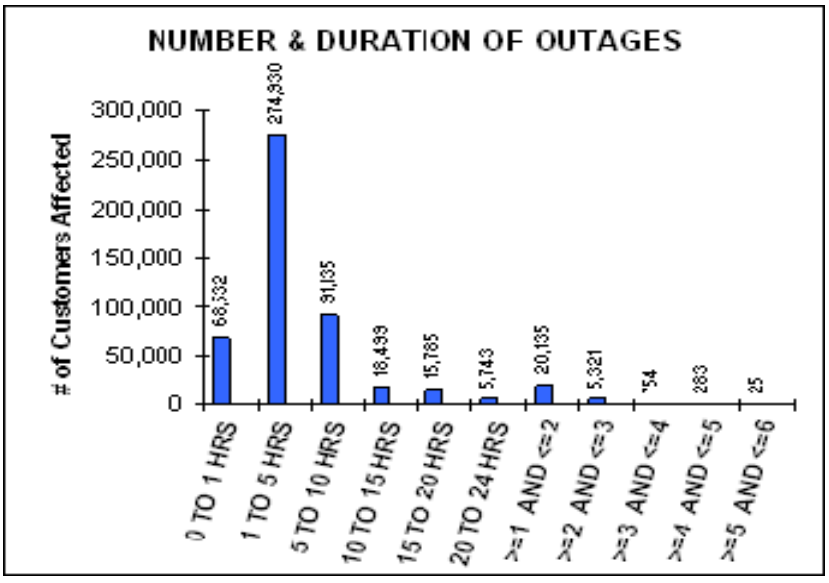
Of the ten largest events listed in Table 5 the following events met the CPUC definition of a major event:

- January 1-5, 2006
- February 26-28, 2006
- March 2-5, 2006
- March 9-14, 2006
- April 4-5, 2006
- July 21-27, 2006
- December 26-28, 2006

The following tables in this section indicate the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Table 6/ Figure 1 – January 1-5, 2006 Outage Event Duration Summary

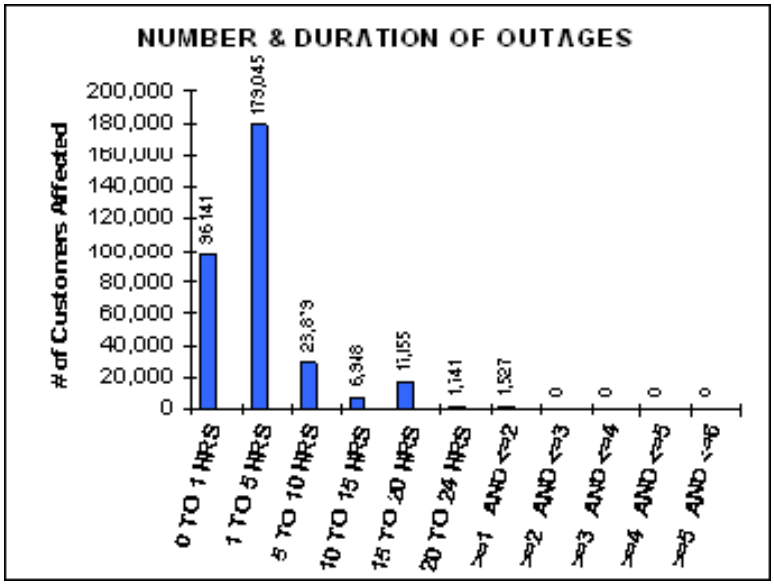
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	01/01/2006	Noted in Table 5	68,532
1 TO 5 HRS	"	"	274,930
5 TO 10 HRS	"	"	91,135
10 TO 15 HRS	"	"	18,499
15 TO 20 HRS	"	"	15,785
20 TO 24 HRS	"	"	5,743
>=1 AND <=2	"	"	20,135
>=2 AND <=3	"	"	5,321
>=3 AND <=4	"	"	754
>=4 AND <=5	"	"	283
>=5 AND <=6	"	"	25
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 1/1/06 - 1/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	68,487	13.67%	93 TO 94 HRS	0	99.94%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	274,890	68.53%	94 TO 95 HRS	0	99.94%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	91,126	86.72%	95 TO 96 HRS	0	99.94%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	18,499	90.41%	96 TO 97 HRS	150	99.97%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	15,785	93.56%	97 TO 98 HRS	0	99.97%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	5,743	94.71%	98 TO 99 HRS	0	99.97%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,341	94.98%	99 TO 100 HRS	0	99.97%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	2,567	95.49%	100 TO 101 HRS	14	99.97%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	1,432	95.78%	101 TO 102 HRS	66	99.98%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	2,716	96.32%	102 TO 103 HRS	0	99.98%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	1,780	96.67%	103 TO 104 HRS	0	99.98%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	951	96.86%	104 TO 105 HRS	18	99.99%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	1,051	97.07%	105 TO 106 HRS	12	99.99%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	796	97.23%	106 TO 107 HRS	0	99.99%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,053	97.44%	107 TO 108 HRS	6	99.99%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	800	97.60%	108 TO 109 HRS	0	99.99%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	362	97.67%	109 TO 110 HRS	0	99.99%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	1,716	98.02%	110 TO 111 HRS	14	99.99%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	143	98.04%	111 TO 112 HRS	0	99.99%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	190	98.08%	112 TO 113 HRS	0	99.99%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	908	98.26%	113 TO 114 HRS	0	99.99%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	207	98.31%	114 TO 115 HRS	3	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	42	98.31%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	111	98.34%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	65	98.35%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	205	98.39%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	368	98.46%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	88	98.48%	120 TO 121 HRS	5	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	442	98.57%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	800	98.73%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	645	98.86%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	891	99.04%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	314	99.10%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	509	99.20%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	70	99.21%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	475	99.31%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	279	99.36%	129 TO 130 HRS	20	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	57	99.38%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	261	99.43%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	924	99.61%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	330	99.68%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	15	99.68%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	165	99.71%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	48	99.72%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	50	99.73%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	202	99.77%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	99.77%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	68	99.79%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	99.79%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	99.79%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	99.79%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.79%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	99.79%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	5	99.79%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	94	99.81%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	9	99.81%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	4	99.81%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	7	99.81%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	62	99.82%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	501,034	
77 TO 78 HRS	17	99.83%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	90	99.84%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	4	99.85%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.85%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	33	99.85%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	301	99.91%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	2	99.91%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.91%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.91%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.91%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	19	99.92%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	1	99.92%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.92%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	101	99.94%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	10	99.94%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.94%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 7/ Figure 2 – February 26-28, 2006 Outage Event Duration Summary

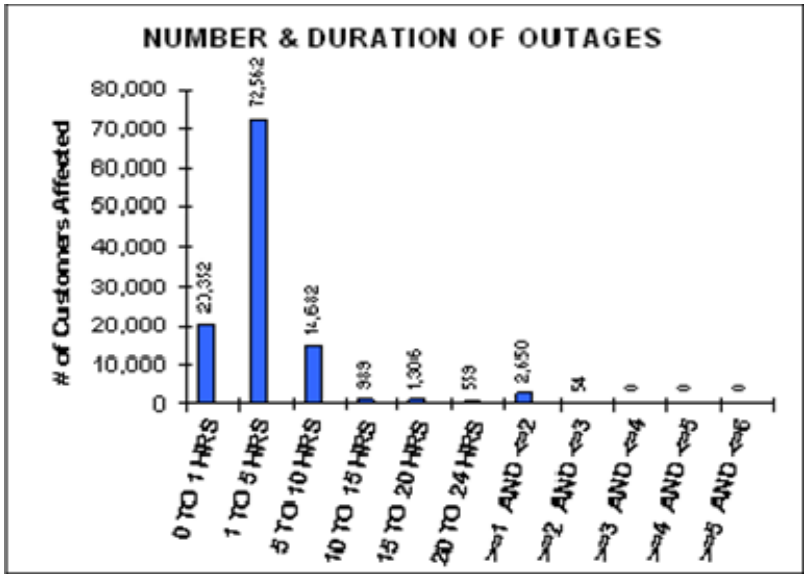
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	02/26/2006	Noted in Table 5	96,141
1 TO 5 HRS	"	"	179,045
5 TO 10 HRS	"	"	28,879
10 TO 15 HRS	"	"	6,948
15 TO 20 HRS	"	"	17,155
20 TO 24 HRS	"	"	1,741
>=1 AND <=2	"	"	1,527
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 2/26/06 - 2/28/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	96,136	29.01%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	178,998	83.03%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	28,877	91.74%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	6,948	93.84%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	17,154	99.01%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	1,741	99.54%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	526	99.70%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	337	99.80%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	191	99.86%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	3	99.86%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	0	99.86%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	1	99.86%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	160	99.91%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	60	99.92%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	16	99.93%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	5	99.93%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	82	99.96%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	99.96%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	99.96%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	12	99.96%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	9	99.96%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	99.96%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.96%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	99.96%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	32	99.97%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	99.97%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	93	100.00%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	100.00%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	100.00%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	100.00%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	331,381	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 8/ Figure 3 – March 2-5, 2006 Outage Event Duration Summary

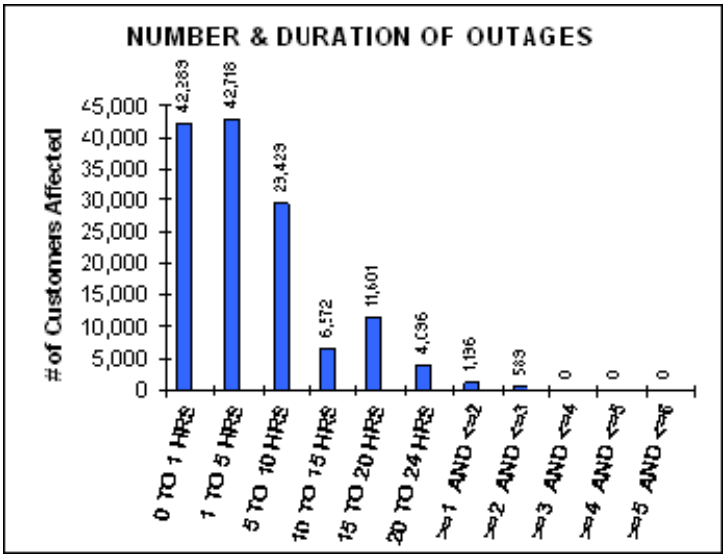
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/02/2006	Noted in Table 5	20,352
1 TO 5 HRS	"	"	72,562
5 TO 10 HRS	"	"	14,682
10 TO 15 HRS	"	"	989
15 TO 20 HRS	"	"	1,306
20 TO 24 HRS	"	"	559
>=1 AND <=2	"	"	2,650
>=2 AND <=3	"	"	54
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 3/2/06 - 3/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	20,352	17.99%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	72,558	82.11%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	14,682	95.09%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	989	95.96%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	1,306	97.12%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	559	97.61%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	0	97.61%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	362	97.93%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	42	97.97%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	158	98.11%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	504	98.55%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	12	98.56%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	19	98.58%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	41	98.62%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	19	98.63%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	34	98.66%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	77	98.73%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	98.73%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	79	98.80%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	17	98.82%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	854	99.57%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	203	99.75%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.75%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	37	99.78%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	1	99.78%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	23	99.80%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	124	99.91%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.91%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	99.91%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	44	99.95%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	1	99.95%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.95%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.95%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	25	99.98%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	9	99.98%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	99.98%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	99.98%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.98%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	99.98%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	99.98%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	99.98%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	99.98%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	1	99.98%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	99.98%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	99.98%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	1	99.98%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	14	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	3	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	113,150	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 9/ Figure 4 – March 9-14, 2006 Outage Event Duration Summary

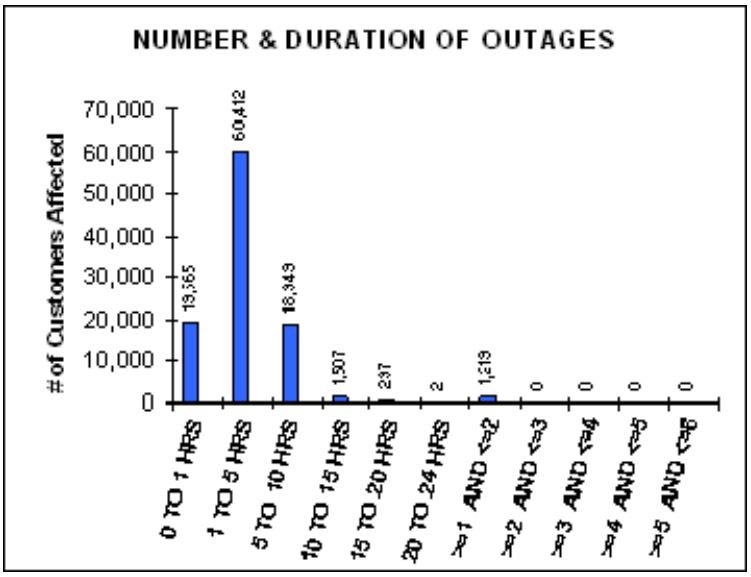
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/09/2006	Noted in Table 5	42,289
1 TO 5 HRS	"	"	42,718
5 TO 10 HRS	"	"	29,429
10 TO 15 HRS	"	"	6,572
15 TO 20 HRS	"	"	11,601
20 TO 24 HRS	"	"	4,096
>=1 AND <=2	"	"	1,196
>=2 AND <=3	"	"	589
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 3/9/06 - 3/14/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	42,289	30.54%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	42,718	61.38%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	29,429	82.63%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	6,572	87.38%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	11,601	95.75%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	4,096	98.71%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	49	98.75%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	167	98.87%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	147	98.97%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	70	99.02%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	52	99.06%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	25	99.08%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	7	99.08%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	64	99.13%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	46	99.16%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	99.16%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	99.16%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	39	99.19%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	187	99.33%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	99.33%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	29	99.35%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	99.35%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.35%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	2	99.35%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	99.35%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	99.35%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	185	99.48%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.48%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	9	99.49%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	118	99.57%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	99.57%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.57%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.57%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	31	99.60%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	99.60%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	99.60%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	99.60%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.60%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	553	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	5	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	138,490	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 10/ Figure 5 – April 4-5, 2006 Outage Event Duration Summary

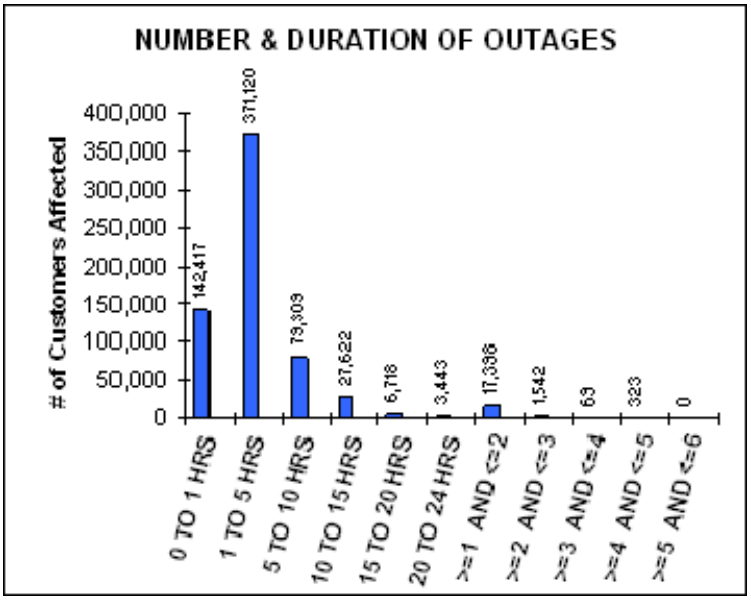
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	04/04/2006	Noted in Table 5	19,565
1 TO 5 HRS	"	"	60,412
5 TO 10 HRS	"	"	18,949
10 TO 15 HRS	"	"	1,507
15 TO 20 HRS	"	"	297
20 TO 24 HRS	"	"	2
>=1 AND <=2	"	"	1,219
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 4/4/06 - 4/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	19,563	19.19%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	60,406	78.45%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	18,936	97.03%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	1,507	98.51%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	297	98.80%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	2	98.80%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1	98.81%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	0	98.81%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	0	98.81%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	7	98.81%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	551	99.35%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	656	100.00%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	0	100.00%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	4	100.00%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	0	100.00%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	100.00%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	100.00%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	100.00%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	100.00%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	100.00%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	0	100.00%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	100.00%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	100.00%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	100.00%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	100.00%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	100.00%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	0	100.00%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	100.00%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	100.00%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	100.00%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	101,930	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 11/ Figure 6 – July 21-27, 2006 Outage Event Duration Summary

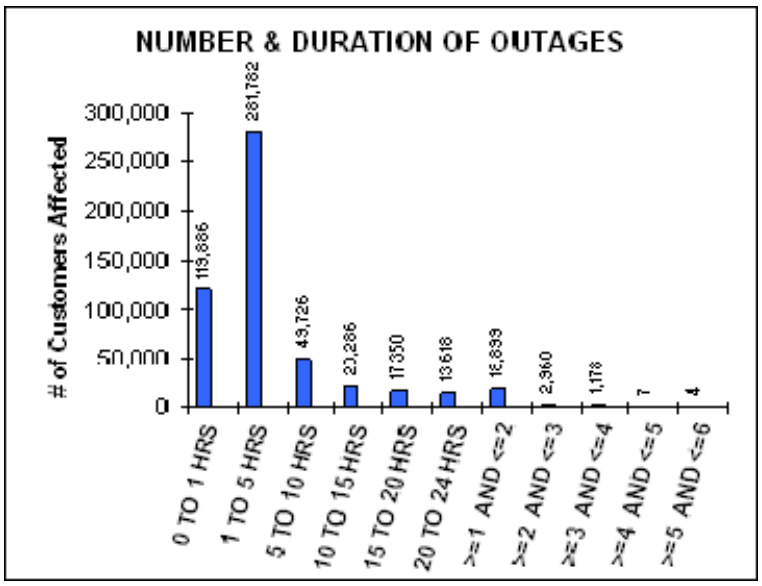
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	07/20/2006	Noted in Table 5	142,417
1 TO 5 HRS	"	"	371,120
5 TO 10 HRS	"	"	79,309
10 TO 15 HRS	"	"	27,622
15 TO 20 HRS	"	"	6,718
20 TO 24 HRS	"	"	3,443
>=1 AND <=2	"	"	17,398
>=2 AND <=3	"	"	1,542
>=3 AND <=4	"	"	69
>=4 AND <=5	"	"	323
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 7/21/06 - 7/27/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	142,410	21.91%	93 TO 94 HRS	0	99.95%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	371,116	79.01%	94 TO 95 HRS	0	99.95%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	79,309	91.21%	95 TO 96 HRS	0	99.95%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	27,622	95.46%	96 TO 97 HRS	0	99.95%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	6,718	96.50%	97 TO 98 HRS	0	99.95%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	3,443	97.03%	98 TO 99 HRS	0	99.95%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	2,576	97.42%	99 TO 100 HRS	0	99.95%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	1,896	97.71%	100 TO 101 HRS	0	99.95%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	3,566	98.26%	101 TO 102 HRS	0	99.95%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	245	98.30%	102 TO 103 HRS	0	99.95%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	2,098	98.62%	103 TO 104 HRS	0	99.95%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	368	98.68%	104 TO 105 HRS	0	99.95%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	1,164	98.86%	105 TO 106 HRS	0	99.95%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	474	98.93%	106 TO 107 HRS	0	99.95%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	349	98.99%	107 TO 108 HRS	0	99.95%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	301	99.03%	108 TO 109 HRS	0	99.95%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	902	99.17%	109 TO 110 HRS	0	99.95%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	519	99.25%	110 TO 111 HRS	0	99.95%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	540	99.33%	111 TO 112 HRS	204	99.98%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	450	99.40%	112 TO 113 HRS	0	99.98%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	119	99.42%	113 TO 114 HRS	0	99.98%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	107	99.44%	114 TO 115 HRS	0	99.98%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	145	99.46%	115 TO 116 HRS	0	99.98%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	754	99.58%	116 TO 117 HRS	0	99.98%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	52	99.58%	117 TO 118 HRS	0	99.98%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	159	99.61%	118 TO 119 HRS	119	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	99	99.62%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	85	99.64%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	110	99.65%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	320	99.70%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	325	99.75%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.75%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	299	99.80%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	69	99.81%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	75	99.82%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	56	99.83%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	15	99.83%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.83%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	99.83%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	149	99.85%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	54	99.86%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	25	99.87%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	13	99.87%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	169	99.89%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	99.89%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	99.89%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	99.89%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	20	99.90%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	11	99.90%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	99.90%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	52	99.91%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.91%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	210	99.94%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	99.94%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	22	99.94%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	99.94%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	47	99.95%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	99.95%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	99.95%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	649,950	
77 TO 78 HRS	0	99.95%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	99.95%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	99.95%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.95%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	99.95%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	99.95%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	99.95%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.95%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.95%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.95%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.95%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	99.95%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.95%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	99.95%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	99.95%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.95%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 12/ Figure 7 – December 26-28, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/26/2006	Noted in Table 5	119,886
1 TO 5 HRS	"	"	281,782
5 TO 10 HRS	"	"	49,726
10 TO 15 HRS	"	"	20,286
15 TO 20 HRS	"	"	17,350
20 TO 24 HRS	"	"	13,618
>=1 AND <=2	"	"	18,899
>=2 AND <=3	"	"	2,960
>=3 AND <=4	"	"	1,178
>=4 AND <=5	"	"	7
>=5 AND <=6	"	"	4
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 12/26/06 - 12/28/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	119,846	22.81%	93 TO 94 HRS	29	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	281,554	76.39%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	49,726	85.86%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	20,286	89.72%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	17,351	93.02%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	13,616	95.61%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,337	95.87%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	523	95.97%	100 TO 101 HRS	1	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	494	96.06%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	620	96.18%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	247	96.23%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	516	96.32%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	2,325	96.77%	105 TO 106 HRS	6	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	657	96.89%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,072	97.10%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	262	97.15%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	767	97.29%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	1,266	97.53%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	983	97.72%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	189	97.76%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	55	97.77%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	843	97.93%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	524	98.03%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	495	98.12%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	32	98.13%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	945	98.31%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	891	98.48%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	308	98.53%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	1,721	98.86%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	1,829	99.21%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	479	99.30%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	123	99.32%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.32%	125 TO 126 HRS	4	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	91	99.34%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	48	99.35%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	49	99.36%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	72	99.37%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	180	99.41%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	150	99.44%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	18	99.44%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	72	99.45%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	46	99.46%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	74	99.48%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	49	99.49%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	322	99.55%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	404	99.62%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	310	99.68%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	129	99.71%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	298	99.76%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	31	99.77%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	99.77%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.77%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	99.77%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	15	99.77%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	99.77%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	107	99.79%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	15	99.80%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	99.80%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	28	99.80%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	525,429	
77 TO 78 HRS	565	99.91%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	270	99.96%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	99.96%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.96%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	8	99.96%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	93	99.98%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	23	99.98%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	22	99.99%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.99%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	18	99.99%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.99%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	99.99%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.99%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	99.99%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	99.99%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.99%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

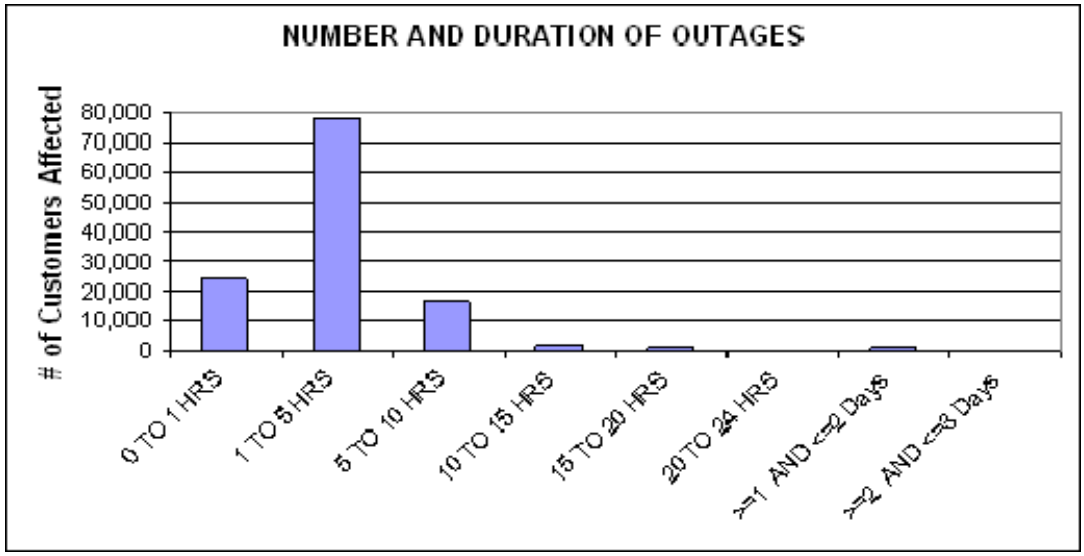
Of the ten largest events listed in Table 5, two events, December 18-20 and December 30-31, met the CPUC definition of a major event. Tables 6 & 7 indicate the number of customers without service at the requested periodic intervals for this event.

Table 6 – December 18-20, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/18/2005	Noted in Table 5	23,963
1 TO 5 HRS	"	"	77,958
5 TO 10 HRS	"	"	16,446
10 TO 15 HRS	"	"	1,897
15 TO 20 HRS	"	"	1,640
20 TO 24 HRS	"	"	50
>=1 AND <=2 Days	"	"	1,577
>=2 AND <=3 Days	"	"	7

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 18-20, 2005 Outage Event Duration Summary



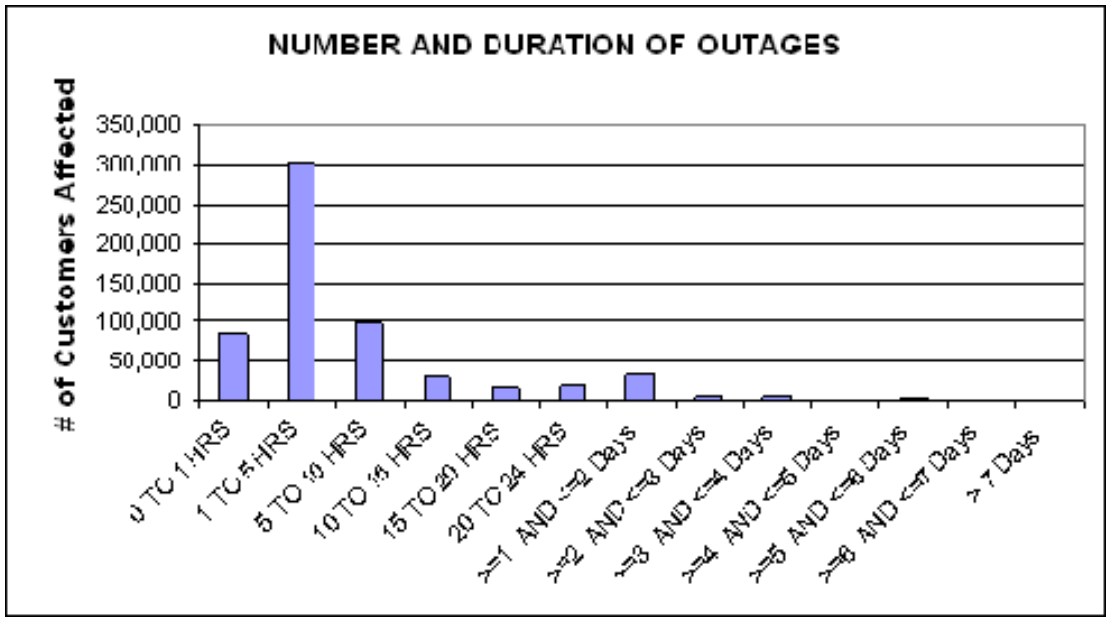
	Major Event Days: 12/18/05 - 12/20/05										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	23,963	19.40%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	77,958	82.50%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	16,446	95.81%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	1,897	97.35%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	1,640	98.68%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	50	98.72%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	0	98.72%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	10	98.73%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	106	98.81%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	59	98.86%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	640	99.38%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	560	99.83%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	8	99.84%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	0	99.84%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	2	99.84%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	99.84%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	99.84%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	99.84%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	99.84%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	99.84%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	16	99.85%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	6	99.86%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.86%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	99.86%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	99.86%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	137	99.97%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	33	99.99%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.99%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	99.99%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	99.99%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	7	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	123,538	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 7 – December 30-31, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Customers Affected
0 TO 1 HRS	12/30-12/31/2005	Noted in Table 5	84,112
1 TO 5 HRS	"	"	302,496
5 TO 10 HRS	"	"	97,544
10 TO 16 HRS	"	"	30,534
15 TO 20 HRS	"	"	15,919
20 TO 24 HRS	"	"	18,220
>=1 AND <=2 Days	"	"	32,842
>=2 AND <=3 Days	"	"	6,500
>=3 AND <=4 Days	"	"	6,561
>=4 AND <=5 Days	"	"	1,093
>=5 AND <=6 Days	"	"	1,434
>=6 AND <=7 Days	"	"	391
> 7 Days	"	"	0

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 2 - December 30-31, 2005 Outage Event Duration



	Major Event Days: 12/30/05 - 12/31/05										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	84,112	14.07%	93 TO 94 HRS	15	99.51%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	302,496	64.69%	94 TO 95 HRS	0	99.51%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	97,544	81.01%	95 TO 96 HRS	31	99.51%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	30,534	86.12%	96 TO 97 HRS	0	99.51%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	15,919	88.78%	97 TO 98 HRS	2	99.51%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	18,220	91.83%	98 TO 99 HRS	0	99.51%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,482	92.08%	99 TO 100 HRS	109	99.53%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	2,143	92.44%	100 TO 101 HRS	96	99.55%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	1,813	92.74%	101 TO 102 HRS	107	99.56%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	3,278	93.29%	102 TO 103 HRS	47	99.57%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	5,595	94.23%	103 TO 104 HRS	28	99.58%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	867	94.37%	104 TO 105 HRS	122	99.60%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	2,452	94.78%	105 TO 106 HRS	27	99.60%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	1,458	95.02%	106 TO 107 HRS	24	99.61%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,671	95.30%	107 TO 108 HRS	119	99.63%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	1,951	95.63%	108 TO 109 HRS	5	99.63%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	1,346	95.86%	109 TO 110 HRS	226	99.66%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	797	95.99%	110 TO 111 HRS	0	99.66%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	172	96.02%	111 TO 112 HRS	52	99.67%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	1,343	96.24%	112 TO 113 HRS	0	99.67%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	4,793	97.05%	113 TO 114 HRS	3	99.67%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	241	97.09%	114 TO 115 HRS	56	99.68%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	561	97.18%	115 TO 116 HRS	0	99.68%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	18	97.18%	116 TO 117 HRS	0	99.68%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	4	97.18%	117 TO 118 HRS	55	99.69%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	7	97.18%	118 TO 119 HRS	0	99.69%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	306	97.24%	119 TO 120 HRS	15	99.69%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	304	97.29%	120 TO 121 HRS	77	99.71%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	99	97.30%	121 TO 122 HRS	16	99.71%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	141	97.33%	122 TO 123 HRS	323	99.76%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	521	97.41%	123 TO 124 HRS	0	99.76%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	344	97.47%	124 TO 125 HRS	2	99.76%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	217	97.51%	125 TO 126 HRS	507	99.85%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	267	97.55%	126 TO 127 HRS	275	99.90%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	497	97.64%	127 TO 128 HRS	0	99.90%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	419	97.71%	128 TO 129 HRS	145	99.92%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	413	97.77%	129 TO 130 HRS	31	99.92%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	209	97.81%	130 TO 131 HRS	0	99.92%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	145	97.83%	131 TO 132 HRS	0	99.92%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	271	97.88%	132 TO 133 HRS	26	99.93%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	1,692	98.16%	133 TO 134 HRS	0	99.93%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	382	98.23%	134 TO 135 HRS	0	99.93%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	111	98.24%	135 TO 136 HRS	0	99.93%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	435	98.32%	136 TO 137 HRS	0	99.93%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	6	98.32%	137 TO 138 HRS	0	99.93%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	20	98.32%	138 TO 139 HRS	1	99.93%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	64	98.33%	139 TO 140 HRS	31	99.93%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	244	98.37%	140 TO 141 HRS	0	99.93%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	151	98.40%	141 TO 142 HRS	0	99.93%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	18	98.40%	142 TO 143 HRS	0	99.93%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	9	98.40%	143 TO 144 HRS	0	99.93%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	98.40%	144 TO 145 HRS	0	99.93%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	7	98.40%	145 TO 146 HRS	28	99.94%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	58	98.41%	146 TO 147 HRS	8	99.94%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	35	98.42%	147 TO 148 HRS	1	99.94%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	24	98.42%	148 TO 149 HRS	68	99.95%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	9	98.43%	149 TO 150 HRS	113	99.97%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	111	98.44%	150 TO 151 HRS	8	99.97%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	15	98.45%	151 TO 152 HRS	19	99.98%	226 TO 227 HRS	0	100.00%	Total	597,646	
77 TO 78 HRS	20	98.45%	152 TO 153 HRS	0	99.98%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	2,434	98.86%	153 TO 154 HRS	0	99.98%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	427	98.93%	154 TO 155 HRS	134	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	273	98.97%	155 TO 156 HRS	12	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	441	99.05%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	1,348	99.27%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	95	99.29%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.29%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.29%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.29%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.29%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	473	99.37%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	385	99.43%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	17	99.44%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	122	99.46%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	286	99.50%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

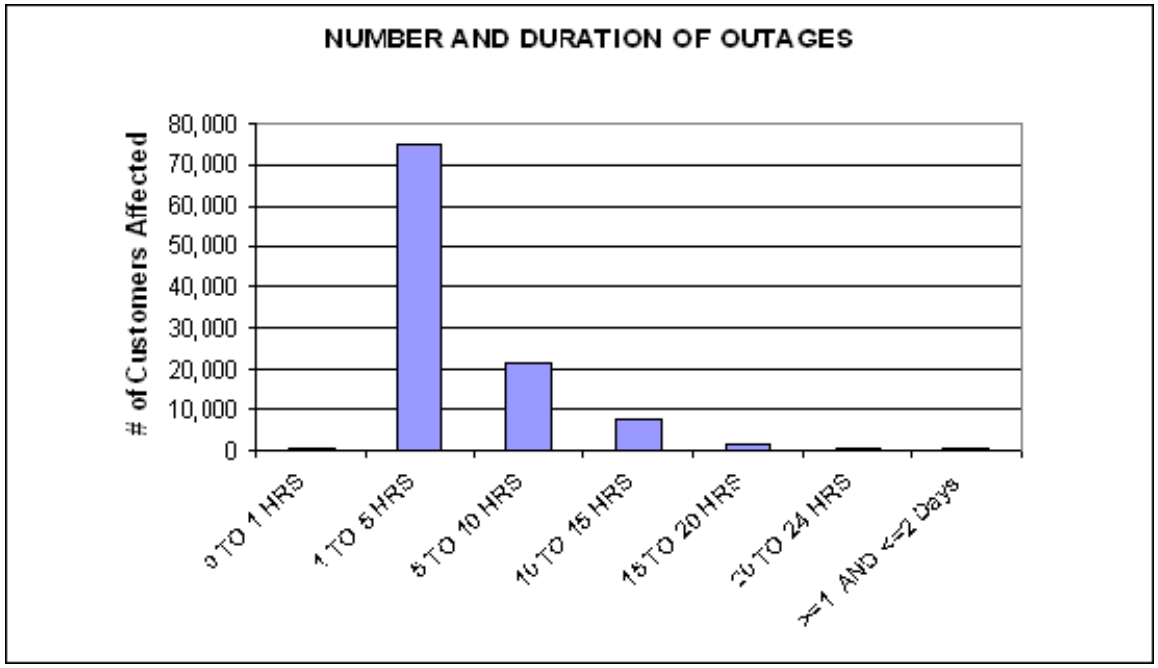
Of the ten largest events listed in 2003, only one event, the December 22 earthquake met the CPUC definition of a major event. Table 5 indicates the number of customers without service at the requested periodic intervals for this request.

Table 5 – December 22, 2003 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/22/2003	Noted in table 4	738
1 TO 5 HRS	"	"	74,623
5 TO 10 HRS	"	"	21,727
10 TO 15 HRS	"	"	7,275
15 TO 20 HRS	"	"	1,642
20 TO 24 HRS	"	"	725
>=1 AND <=2 Days	"	"	704

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 22, 2003 Outage Event Duration Summary



Of the ten largest events listed in Table 4, two events, November 7-8 and December 13-21, met the CPUC definition of a major event. Tables 5 & 6 indicate the number of customers without service at the requested periodic intervals for this event.

Table 5 – November 7-8, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	11/7-8/2002	Noted in Table 4	148,826
1 TO 5 HRS	"	"	434,220
5 TO 10 HRS	"	"	147,786
10 TO 15 HRS	"	"	61,686
15 TO 20 HRS	"	"	29,368
20 TO 24 HRS	"	"	13,523
>=1 AND <=2 Days	"	"	40,519
>=2 AND <=3 Days	"	"	2,413
>=3 AND <=4 Days	"	"	673
>=4 AND <=5 Days	"	"	248
>=5 AND <=6 Days	"	"	50

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 – November 7-8, 2002 Outage Event Duration Summary

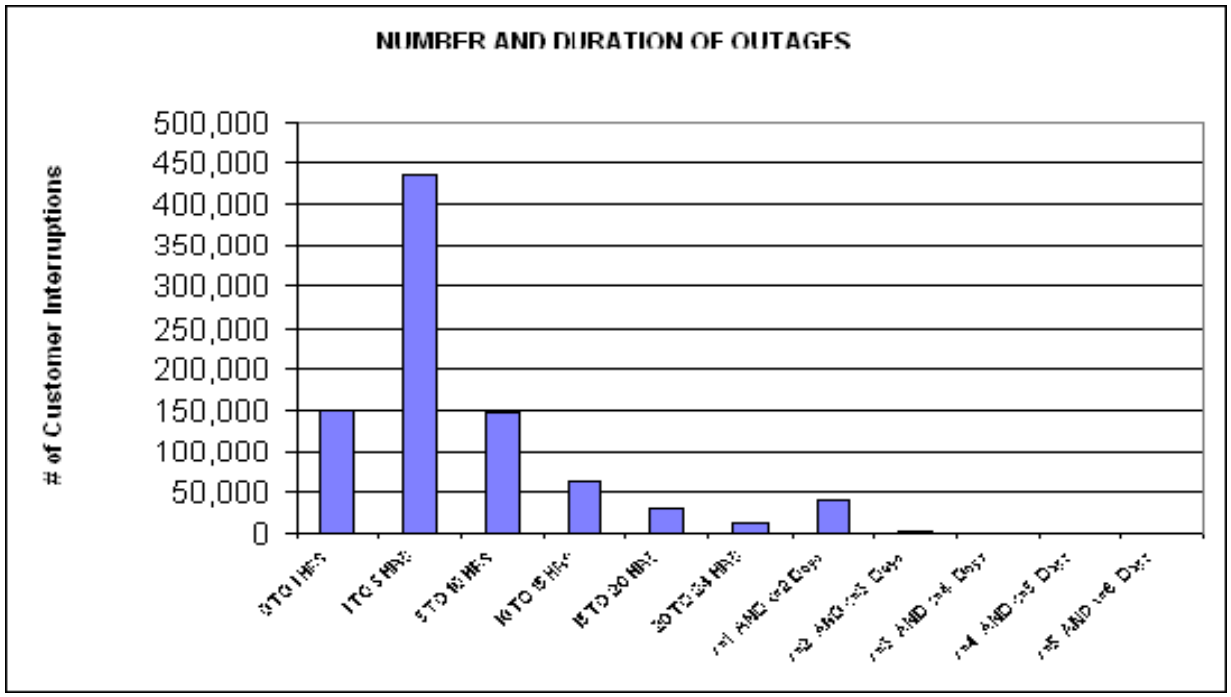
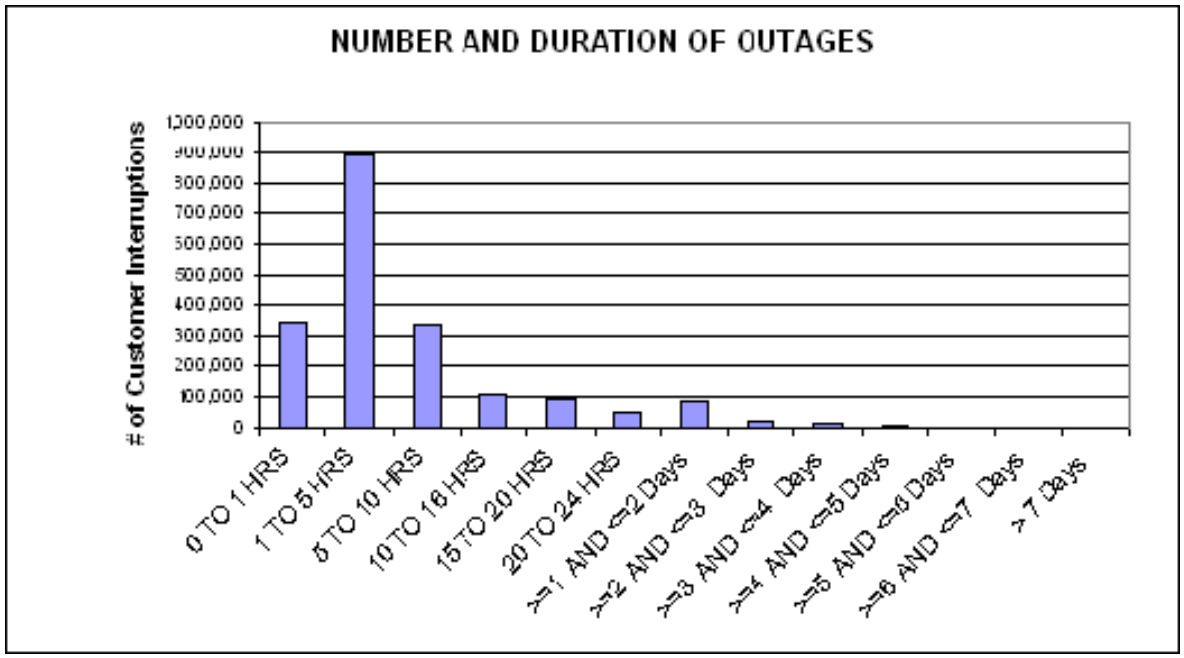


Table 6 – December 13-21, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	12/13-21/2002	Noted in Table 4	337,928
1 TO 5 HRS	"	"	890,960
5 TO 10 HRS	"	"	335,885
10 TO 16 HRS	"	"	108,435
15 TO 20 HRS	"	"	93,117
20 TO 24 HRS	"	"	53,358
>=1 AND <=2 Days	"	"	84,153
>=2 AND <=3 Days	"	"	25,199
>=3 AND <=4 Days	"	"	13,902
>=4 AND <=5 Days	"	"	5,516
>=5 AND <=6 Days	"	"	2,240
>=6 AND <=7 Days	"	"	913
> 7 Days	"	"	998

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 2 – December 13-21, 2002 Outage Event Duration Summary



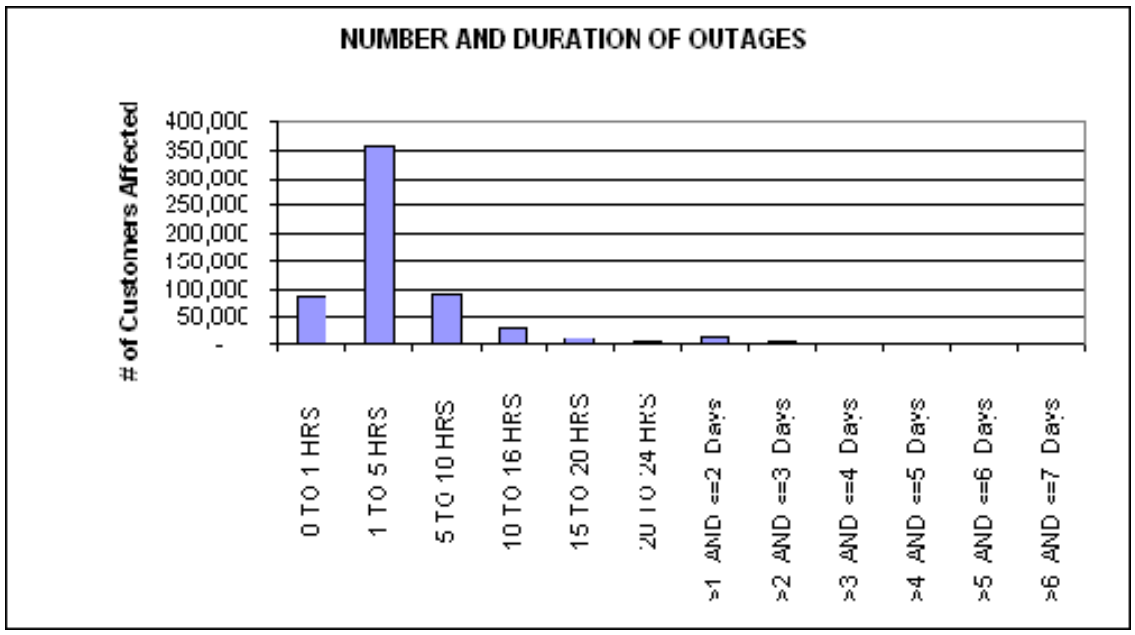
Of the ten largest events listed in Table 4, only one event, November 24, met the CPUC definition of a major event. Table 5 indicates the number of customers without service at the requested periodic intervals for this event.

Table 5 – November 24, 2001 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 to 1 HRS	11/24/2001	Noted in Table 4	85,878
1 to 5 HRS	"	"	355,344
5 to 10 HRS	"	"	89,828
10 to 15 HRS	"	"	30,067
15 to 20 HRS	"	"	12,321
20 to 24 HRS	"	"	4,824
>1 and <=2 Days	"	"	17,359
>2 and <=3 Days	"	"	2,991
>3 and <=4 Days	"	"	191
>4 and <=5 Days	"	"	13
>5 and <=6 Days	"	"	1
>6 and <=7 Days	"	"	1

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 – November 24, 2001 Outage Event Duration Summary



Customers Experiencing > 12 Sustained Outages During 2011

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2011. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 8 – Customers Experiencing > 12 Sustained Outages During 2010

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1101	61
CENTRAL COAST	BIG BASIN 1102	40
CENTRAL COAST	CAMP EVERS 2105	33
CENTRAL COAST	POINT MORETTI 1101	29
CENTRAL COAST	ROB ROY 2104	56
CENTRAL COAST	SAN ARDO 1102	14
CENTRAL COAST	WATSONVILLE 2101	1
DE ANZA	CAMP EVERS 2106	79
DE ANZA	LOS GATOS 1106	1
DE ANZA	LOS GATOS 1107	156
DIABLO	CONTRA COSTA 2109	16
DIABLO	KIRKER SUB 2104	3
FRESNO	DUNLAP 1102	57
FRESNO	DUNLAP 1103	318
NORTH BAY	CALISTOGA 1101	14
NORTH BAY	OLEMA 1101	13
NORTH BAY	SILVERADO 2104	2
NORTH COAST	FORT BRAGG STA A 1101	3
NORTH COAST	GARBERVILLE 1101	71
NORTH COAST	GARBERVILLE 1102	234
NORTH COAST	LAKEVILLE 1101	10
NORTH VALLEY	CHALLENGE 1101	19
NORTH VALLEY	ORO FINO 1102	99
PENINSULA	MENLO 1103	22
SACRAMENTO	DIXON 1103	13
SACRAMENTO	GRAND ISLAND 2225	3
SACRAMENTO	MADISON 2101	5
SIERRA	ALLEGHANY 1101	197
SIERRA	APPLE HILL 2102	16
SIERRA	EL DORADO P H 2101	1,162
SIERRA	PLACERVILLE 2106	255
STOCKTON	LOCKEFORD SUB 2102	7
STOCKTON	MANTECA 1706	3
STOCKTON	SALT SPRINGS 2102	170
STOCKTON	STANISLAUS 1702	532
YOSEMITE	CURTIS 1703	38
YOSEMITE	MARIPOSA 2101	9
YOSEMITE	MIWUK SUB 1701	31

Customers Experiencing > 12 Sustained Outages During 2009

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2009. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 8 – Customers Experiencing > 12 Sustained Outages During 2009

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 1101	169
CENTRAL COAST	BIG BASIN 1102	14
CENTRAL COAST	DOLAN ROAD 1104	1
CENTRAL COAST	POINT MORETTI 1101	8
CENTRAL COAST	ROB ROY 2105	13
DE ANZA	LOS GATOS 1107	441
LOS PADRES	ZACA 1101	1
NORTH COAST	FITCH MOUNTAIN 1113	6
NORTH COAST	GARBERVILLE 1102	321
NORTH VALLEY	CHALLENGE 1101	2
SACRAMENTO	ARBUCKLE 1102	4
SACRAMENTO	COLUSA 1103	6
SACRAMENTO	GRAND ISLAND 2226	13
SACRAMENTO	GRAND ISLAND 2227	7
SACRAMENTO	JAMESON 1104	7
SACRAMENTO	MADISON 2101	15
SIERRA	ALLEGHANY 1101	8
SIERRA	EL DORADO P H 2101	294
STOCKTON	FROGTOWN 1702	86
STOCKTON	WEST POINT 1102	1

Customers Experiencing > 12 Sustained Outages During 2008

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2008. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2008

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	6
CENTRAL COAST	BEN LOMOND 1101	699
CENTRAL COAST	BIG BASIN 1101	223
CENTRAL COAST	BIG BASIN 1102	16
CENTRAL COAST	CAMP EVERS 2105	92
CENTRAL COAST	LOMPICO 0401	20
CENTRAL COAST	OTTER 1102	194
CENTRAL COAST	POINT MORETTI 1101	14
CENTRAL COAST	ROB ROY 2104	354
CENTRAL COAST	SOLEDAD 2101	99
DE ANZA	CAMP EVERS 2106	43
DE ANZA	LOS GATOS 1106	166
DE ANZA	LOS GATOS 1107	45
LOS PADRES	SANTA MARIA 1105	306
LOS PADRES	SISQUOC 1102	2
NORTH BAY	NAPA 1107	29
NORTH BAY	SAUSALITO 1102	13
NORTH COAST	ARCATA 1121	7
NORTH COAST	BRIDGEVILLE 1101	6
NORTH COAST	EEL RIVER 1101	10
NORTH COAST	GARBERVILLE 1102	425
NORTH COAST	HOOPA 1101	223
NORTH COAST	OLEMA 1101	14
NORTH COAST	POINT ARENA 1101	3
NORTH COAST	RIO DELL 1102	11
NORTH COAST	WILLOW CREEK 1101	35
NORTH VALLEY	LOGAN CREEK 2102	1
NORTH VALLEY	NORD 1104	1
PENINSULA	MENLO 1103	15
SACRAMENTO	KNIGHTS LANDING 1101	3
SACRAMENTO	MERIDIAN 1101	13
SACRAMENTO	RICE 1101	5
SACRAMENTO	RICE 1103	4
SIERRA	BRUNSWICK 1105	12
SIERRA	EAST NICOLAUS 1101	6
SIERRA	EL DORADO P H 2101	127
SIERRA	MOUNTAIN QUARRIES 2101	65
SIERRA	PLACERVILLE 2106	395
SIERRA	TUDOR 1101	9
STOCKTON	CORRAL 1103	19
YOSEMITE	CURTIS 1703	45
YOSEMITE	MERCED 1114	26
YOSEMITE	ORO LOMA 1106	2

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2007

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2007. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2007

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	DOLAN ROAD 1104	33
CENTRAL COAST	ROB ROY 2104	53
DIABLO	BRENTWOOD SUB 2105	17
LOS PADRES	SISQUOC 1102	1
LOS PADRES	ZACA 1101	1
NORTH BAY	NOVATO 1104	8
NORTH BAY	SILVERADO 2102	16
NORTH COAST	BRIDGEVILLE 1102	9
NORTH COAST	MONTE RIO 1111	8
NORTH VALLEY	CHALLENGE 1101	350
NORTH VALLEY	GERBER 1102	22
NORTH VALLEY	JACINTO 1101	2
SACRAMENTO	CORDELIA 1104	57
SACRAMENTO	JAMESON 1104	9
SACRAMENTO	PEABODY 2107	72
SIERRA	EL DORADO P H 2101	10
YOSEMITE	COTTLE 1702	63
YOSEMITE	FIGARDEN SUB. 2110	2

Customers Experiencing > 12 Sustained Outages During 2006

Table 14 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2006. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 14 – Customers Experiencing > 12 Sustained Outages During 2006

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	220
CENTRAL COAST	BEN LOMOND 1101	620
CENTRAL COAST	BIG BASIN 1102	1
CENTRAL COAST	BIG TREES 0402	73
CENTRAL COAST	CAMP EVERS 2105	246
CENTRAL COAST	CASTROVILLE 2103	11
CENTRAL COAST	GREEN VALLEY 2103	4
CENTRAL COAST	HOLLISTER 2104	30
CENTRAL COAST	LOMPICO 0401	175
CENTRAL COAST	ROB ROY 2104	160
DE ANZA	CAMP EVERS 2106	818
DE ANZA	LOS GATOS 1107	58
DIABLO	KIRKER SUB 2104	395
FRESNO	WOODWARD 2108	1
LOS PADRES	CAYUCOS 1102	3
LOS PADRES	OCEANO 1101	20
LOS PADRES	OILFIELDS 1103	57
LOS PADRES	SANTA MARIA 1108	77
LOS PADRES	SISQUOC 1102	4
NORTH BAY	OLEMA 1101	13
NORTH COAST	ARCATA 1121	7
NORTH COAST	COTATI 1103	14
NORTH COAST	GARBERVILLE 1101	19
NORTH COAST	GARBERVILLE 1102	19
NORTH COAST	HOOPA 1101	74
NORTH COAST	JANES CREEK 1103	35
NORTH COAST	MONTE RIO 1111	86
NORTH COAST	RIO DELL 1102	22
NORTH COAST	SONOMA 1107	11
NORTH VALLEY	ESQUON 1103	20
PENINSULA	MENLO 1103	2
SACRAMENTO	DEEPWATER 1107	26
SACRAMENTO	GRAND ISLAND 2225	86
SACRAMENTO	PEABODY 2107	4
SACRAMENTO	PUTAH CREEK 1102	99
SIERRA	APPLE HILL 2102	195
SIERRA	EL DORADO P H 2101	970
SIERRA	PLACERVILLE 2106	309
STOCKTON	MANTECA 1704	64
STOCKTON	MANTECA 1705	140

Customers Experiencing > 12 Sustained Outages During 2005

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2005. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 8 – Customers Experiencing > 12 Sustained Outages During 2005

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1102	13
CENTRAL COAST	BIG TREES 0402	32
CENTRAL COAST	CAMP EVERS 2104	93
CENTRAL COAST	GREEN VALLEY 2101	1
CENTRAL COAST	ROB ROY 2104	71
CENTRAL COAST	ROB ROY 2105	13
CENTRAL COAST	VIEJO 2202	30
DIABLO	BRENTWOOD SUB 2105	1
DIABLO	CONTRA COSTA 2108	21
FRESNO	DUNLAP 1103	270
FRESNO	KINGSBURG 1116	967
KERN	TEJON 1102	249
LOS PADRES	OILFIELDS 1103	28
LOS PADRES	SISQUOC 1103	151
LOS PADRES	ZACA 1101	1
NORTH BAY	CALISTOGA 1101	49
NORTH BAY	PUEBLO 2103	32
NORTH BAY	SILVERADO 2104	146
NORTH COAST	EEL RIVER 1101	122
NORTH COAST	FRUITLAND 1142	13
NORTH COAST	GARBERVILLE 1101	12
NORTH COAST	GARBERVILLE 1102	10
NORTH COAST	HARTLEY 1101	3
NORTH COAST	MONTE RIO 1111	8
NORTH COAST	OLEMA 1101	10
NORTH COAST	RIO DELL 1102	2
NORTH COAST	WILLITS 1103	6
NORTH COAST	WILLOW CREEK 1101	3
SACRAMENTO	GRAND ISLAND 2224	244
SACRAMENTO	MADISON 1105	14
SACRAMENTO	PUTAH CREEK 1102	44
SIERRA	EL DORADO P H 2101	734
STOCKTON	COLONY 1102	25
STOCKTON	FROGTOWN 1702	19
STOCKTON	MIDDLE RIVER 1101	4
STOCKTON	OLETA 1101	40
YOSEMITE	OAKHURST 1103	4
YOSEMITE	PEORIA FLAT 1701	117
YOSEMITE	SPRING GAP 1701	37
YOSEMITE	STOREY 1109	25
YOSEMITE	VALLEY HOME 1701	30

Customers Experiencing > 12 Sustained Outages During 2004

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2004. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2004

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	11
CENTRAL COAST	BEN LOMOND 1101	284
CENTRAL COAST	CAMP EVERS 2104	343
CENTRAL COAST	CAMP EVERS 2105	105
CENTRAL COAST	FOREST 0422	30
CENTRAL COAST	GREEN VALLEY 2101	39
CENTRAL COAST	LOS OSITOS 2101	108
CENTRAL COAST	POINT MORETTI 1101	21
CENTRAL COAST	ROB ROY 2104	66
CENTRAL COAST	SOLEDAD 2101	12
DE ANZA	CAMP EVERS 2106	408
DIABLO	BRENTWOOD SUB 2113	16
LOS PADRES	SISQUOC 1103	151
NORTH BAY	MONTICELLO 1101	23
NORTH BAY	NAPA 1102	10
NORTH COAST	GARBERVILLE 1101	29
NORTH COAST	GARBERVILLE 1102	13
NORTH COAST	MOLINO 1101	77
NORTH COAST	OLEMA 1101	18
NORTH COAST	TRINIDAD 1102	13
NORTH VALLEY	LOGAN CREEK 2101	54
NORTH VALLEY	ORO FINO 1102	279
SIERRA	ALLEGHANY 1101	152
STOCKTON	AVENA 1702	17
STOCKTON	WEST POINT 1101	26
YOSEMITE	RIVERBANK 1713	144

Customers Experiencing > 12 Sustained Outages During 2003

Table 6 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2003. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 6 - Customers Experiencing > 12 Sustained Outages During 2003

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	6
CENTRAL COAST	BIG BASIN 1101	35
CENTRAL COAST	CAMP EVERS 2104	22
CENTRAL COAST	GREEN VALLEY 2101	38
CENTRAL COAST	LOS OSITOS 2101	6
DE ANZA	CAMP EVERS 2105	90
DE ANZA	LOS GATOS 1106	191
DIABLO	BRENTWOOD SUB 2113	6
DIABLO	CLAYTON 2212	16
NORTH COAST	BRIDGEVILLE 1102	1
NORTH COAST	EEL RIVER 1101	121
NORTH COAST	GARBERVILLE 1101	5
NORTH COAST	GARBERVILLE 1102	7
NORTH COAST	HARTLEY 1101	27
NORTH COAST	MENDOCINO 1101	145
NORTH COAST	MONTE RIO 1111	78
SACRAMENTO	MADISON 1105	15
STOCKTON	HERDLYN 1103	32
YOSEMITE	GUSTINE 1102	2
YOSEMITE	MENDOTA 1102	239

Customers Experiencing > 12 Sustained Outages During 2002

Table 7 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2002. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 7 - Customers Experiencing > 12 Sustained Outages During 2002

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	CAMP EVERS 2104	90
CENTRAL COAST	LOMPICO 0401	4
DIABLO	CONTRA COSTA 2109	8
FRESNO	DEVILS DEN 1101	1
NORTH BAY	CALISTOGA 1102	52
NORTH BAY	SILVERADO 2105	31
NORTH COAST	EEL RIVER 1101	89
NORTH COAST	GARBERVILLE 1101	38
NORTH COAST	GARBERVILLE 1102	76
NORTH COAST	MONTE RIO 1111	2
NORTH VALLEY	LOGAN CREEK 2101	53
SAN JOSE	LLAGAS 2104	28
YOSEMITE	COTTLE 1702	3

Customers Experiencing > 12 Sustained Outages During 2001

Table 6 lists all circuits where one or more customers on a circuit that experienced more than 12 sustained outages in 2000. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 6 - Customers Experiencing > 12 Sustained Outages During 2001

Division	Feeder Name	# Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1101	170
CENTRAL COAST	BIG BASIN 1102	150
CENTRAL COAST	CASTROVILLE 2103	8
CENTRAL COAST	FOREST 0422	21
CENTRAL COAST	POINT MORETTI 1101	49
DE ANZA	CAMP EVERS 2106	130
DE ANZA	LOS GATOS 1106	45
DE ANZA	LOS GATOS 1107	129
FRESNO	DUNLAP 1102	341
FRESNO	TULARE LAKE 2108	11
KERN	SISQUOC 1102	3
LOS PADRES	CABRILLO 1103	47
NORTH BAY	CALISTOGA 1101	6
NORTH COAST	ANNAPOLIS 1101	5
NORTH COAST	ARCATA 1122	16
NORTH COAST	CLEAR LAKE 1101	37
NORTH COAST	GARBERVILLE 1101	342
NORTH COAST	GARBERVILLE 1102	302
NORTH COAST	GEYSERVILLE 1101	14
NORTH COAST	HOOPA 1101	29
NORTH COAST	MONTE RIO 1111	562
NORTH COAST	MONTE RIO 1113	140
NORTH COAST	RIO DELL 1102	161
NORTH COAST	WILLITS 1103	35
NORTH VALLEY	LOGAN CREEK 2101	64
NORTH VALLEY	LOGAN CREEK 2102	27
NORTH VALLEY	WYANDOTTE 1103	13
PENINSULA	HALF MOON BAY 1103	45
SACRAMENTO	MADISON 1105	30
SAN JOSE	LLAGAS 2104	29
SIERRA	BRUNSWICK 1105	686
SIERRA	CATLETT 1101	13
SIERRA	PLACERVILLE 2106	80
STOCKTON	PINE GROVE 1102	125
STOCKTON	VIERRA 1702	91
YOSEMITE	LE GRAND 1110	9
YOSEMITE	OAKHURST 1103	422

Total – 4,387

Pacific Gas and Electric Company™

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March 1, 2013

BY HAND DELIVERY
AND
ELECTRONIC MAIL (PAC@CPUC.GOV)

Paul Clanon, Executive Director
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: 2012 Annual Electric Distribution Reliability Report, D96-09-045 and D.04-10-034

Dear Mr. Clanon:

Pursuant to Decision 96-09-045 and portions of Decision 04-10-034, enclosed is a copy of Pacific Gas and Electric Company's 2012 Annual Electric Distribution Reliability Report. I am also sending you an electronic version via email.

Sincerely,

Barbara H. Clement

BHC/mbs

cc: Edward Randolph, Director
David K. Kee, Energy Division
Joe Como, Acting Director DRA
Linda Serizawa, Deputy Director, DRA
Mark Pocta, Program Manager, DRA

Enclosure

PACIFIC GAS AND ELECTRIC COMPANY

2012 ANNUAL ELECTRIC RELIABILITY REPORT
(D.96-09-045 AND D.04-10-034)

MARCH 1, 2013

TABLE OF CONTENTS

NOTE: Some graphics provided in this report are photocopies of graphics used in earlier reports and are not completely legible. Please contact PG&E if you have any questions about the information provided in those graphics.

General

This is the 2012 Reliability Report for Pacific Gas & Electric Company as required by Decision 96-09-045. This report also includes system reliability data based on the IEEE Standard 1366 as stated in the CPUC approved PG&E Advice Letter 3812-E (approved on July 25, 2011). In addition, this report includes some additional reporting requirements as specified in Decision 04-10-034 and its Appendix A. The report consists of the following:

Section	Description
1.	System Indices For The Last 10 Years (2003-2012)
2.	Significant Outage Events Of 2012
3.	Customers Experiencing >12 Sustained Outages In 2012
4.	Attachment 1 - Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)
5.	Attachment 2 - PG&E Service Territory Map
6.	Attachment 3 - Summary list of Excludable Major Events per D. 96-09-045
7.	Attachment 4 - System Indices For The Last 10 Years (2003-2012) Based on IEEE 1366
8.	Attachment 5 - Historical (2002-2011) Outage Information From Prior Reports

PG&E maintains account specific information for customers affected by outages that are recorded in PG&E's outage reporting system (OUTAGE). This system tracks outages at the generation, transmission, substation, primary distribution, and individual transformer levels. Additionally, OUTAGE models the actual electric switching operations during the circuit restoration process (which is useful for determining accurate customer outage minutes for calculating SAIDI and CAIDI). PG&E used its most current outage data to compile the information contained in this report.

SECTION 1

System Indices (2003-2012)

Table 1 lists the required SAIDI, SAIFI, and MAIFI values in accordance with Appendix A of D. 96-09-045. As required by Decision 04-10-034, CAIDI values are also included in this report.

Table 1 - System Indices (2003-2012)
(Includes Transmission, Distribution and Generation related outages)

	Major Events Included				Major Events Excluded			
YEAR	SAIDI	SAIFI	MAIFI	CAIDI	SAIDI	SAIFI	MAIFI	CAIDI
2003	208.0	1.411	1.878	147.5	201.8	1.389	1.874	145.3
2004	205.3	1.426	1.875	143.9	205.1	1.425	1.872	143.9
2005	249.3	1.549	1.895	161.0	187.1	1.407	1.782	132.9
2006	280.5	1.727	1.768	162.4	150.9	1.273	1.532	118.5
2007	159.9	1.249	1.565	128.0	159.9	1.249	1.565	128.0
2008	416.4	1.563	1.829	266.4	166.7	1.254	1.634	132.9
2009	208.2	1.308	1.540	159.1	163.1	1.193	1.474	136.7
2010	246.3	1.384	1.487	178.0	168.6	1.167	1.311	144.4
2011	275.7	1.261	1.478	218.6	236.0	1.195	1.434	197.6
2012	138.9	1.118	1.918	124.3	138.9	1.118	1.918	124.3

Included in this annual report is supplemental information noted in Tables 2 and 3 representing the corresponding indexes separated for both the distribution and transmission systems. It should be noted that the totals from these two tables will not exactly match Table 1 for the following reasons:

(a) Generation related outages are included in Table 1 but not in Tables 2 and 3;
(b) There are database limitations related to the major event exclusion process when separating the transmission and distribution systems.

Please also note, the MAIFI information is not included in these tables since the existing non-SCADA automatic recording devices (EON[1] or Smart Meters) do not distinguish between the two systems.

Table 2 - Distribution System Indices (2003-2012)
(Excludes transmission and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2003	187.6	1.283	146.3	181.6	1.263	143.9
2004	181.7	1.277	142.2	181.5	1.277	142.1
2005	210.9	1.352	156.0	157.7	1.222	129.0
2006	251.0	1.534	163.6	136.5	1.137	120.1
2007	138.6	1.117	124.0	138.6	1.117	124.0
2008	377.8	1.428	264.6	150.3	1.155	130.1
2009	192.8	1.204	160.2	149.9	1.099	136.3
2010	220.0	1.251	175.9	153.4	1.066	143.9
2011	243.9	1.115	218.8	215.5	1.085	198.7
2012	122.3	1.010	121.1	122.3	1.010	121.1

Table 3 - Transmission System Indices (2003-2012)
(Excludes distribution and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2003	20.4	0.128	159.7	20.2	0.127	159.5
2004	23.3	0.148	157.7	23.3	0.148	157.8
2005	38.3	0.197	195.1	29.3	0.185	158.8
2006	29.5	0.193	152.5	14.4	0.136	105.4
2007	21.3	0.132	161.5	21.3	0.132	161.5
2008	38.3	0.135	284.3	16.2	0.099	163.6
2009	15.4	0.105	147.0	13.2	0.094	140.7
2010	26.3	0.133	198.4	15.2	0.101	149.7
2011	31.7	0.144	219.7	29.1	0.129	225.2
2012	16.6	0.108	153.3	16.6	0.108	153.3

Excludable Major Events

Appendix A to D. 96-09-045 defines Excludable Major Events as follows:

> Each utility will exclude from calculation of its reliability indices major events that meet either of the two following criteria: (a) the event is caused by earthquake, fire, or storms of sufficient intensity to give rise to a state of emergency being declared by the government, or (b) any other disaster not in (a) that affects more than 15% of the system facilities or 10% of the utility's customers, whichever is less for each event.

There were no Excludable Major Events in 2012, as defined in Appendix A of D. 96-09-045.

[1] On November 18, 2011 the EON recording system was removed from service. Momentary outage data is now being collected from SCADA devices and through the use of Smart Meters. Data collection from the Smart Meters is more effective than the previous EON system since Smart Meters don't rely on customer volunteers having EON devices securely connected inside their buildings. PG&E anticipates that the number of future momentary outages recorded will increase slightly as a result of this more effective approach.

SECTION 2

Significant Outage Events Of 2012

Table 5 lists the ten largest outage events experienced during 2012. PG&E interprets this reporting requirement as the ten events (individual days or in some cases a group of consecutive days) with a significant number of customer interruptions in the system or a portion of the system. These events are listed in descending order of customer interruptions.

Table 4 - Ten Largest 2012 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	The final and strongest storm of an 'Atmospheric River' series moved through the territory on 12/02/2012 delivering widespread gusts of 50-70 mph in the northern Sacramento Valley. The strongest wind observed was in Plumas National Forest where a gust of 102 mph was recorded. This system also brought heavy amounts of rain across northern California where localized flooding and mudslides were reported in numerous locations. Precipitation totals from the entire series (See Rank #3) topped 20 inches in the wettest locations in the north.	12/02/2012	298,393	80		N
2	A series of moderate to strong storms impacted the Service Area delivering rain, wind, thunderstorms and several feet of snow across the northern mountains and Sierra. The second storm in the series moved onto the Humboldt coast during the evening of 12/21 and then progressed south and east through the territory overnight into 12/22. The third and strongest storm of the series developed just off the coast and pushed a vigorous cold front through the Service Area on 12/23. Gusts up to 80 mph were observed over elevated terrain. Yet another round of heavy mountain snow fell across the north and the Sierra. Up to 6 feet of snow fell in some locations across the north during the series making restoration difficult.	12/21/2012 – 12/23/2012	195,099	172		N
3	The first storm of the 'Atmospheric River' series moved into the territory on 11/28 and delivered strong south winds up to 50-60 mph and heavy rains. The second and stronger system impacted the Territory 11/29 through 11/30. This system brought significant rainfall totals across the north half of the Territory with up to 10" observed in the wettest locations across elevated terrain. After a brief break on 12/1 the final and strongest storm of the series moved through on 12/2 (see Rank 1).	11/28/2012 – 11/30/2012	183,145	71		N
4	On 1/20 a strong Pacific weather system with an associated well-organized frontal band pushed north to south through the territory. This system delivered heavy rains and gusty southerly winds to most locations and was the first rain in a month or more for many locations across the south half of the territory.	1/20/2012 – 1/21/2012	168,496	40		N
5	On 3/16 a system impacted Northern Region and the Bay Area with heavy showers, gusty southerly winds, and a few lightning strikes. On 3/17 this system progressed south through Central Coast and Central Valley Divisions bringing heavy rains, thunderstorms and gusty winds. On 3/18, snow levels fell as cold air filtered in resulting in low snow outage activity from Grass Valley south into Fresno division.	3/16/2012 – 3/18/2012	146,602	63		N
6	Overnight Sunday, 10/21/2012 into Monday, 10/22/2012 a cold front associated with a unusually cold, early-season storm swept west to east across the PG&E Service Area bringing a variety of adverse weather including rain, wind, thunderstorms and low snow. Two tornados also formed in the eastern Sacramento Valley and Sierra foothills.	10/22/2012	129,801	22		N
7	A vigorous late season weather system swept through the Service Area on 6/4 – 6/5 and brought a variety of adverse weather conditions. This system delivered over 700 lightning strikes across the Service Territory with the majority occurring in the northern Sacramento Valley. Winds gusting to 40 mph came up abruptly in the San Joaquin causing numerous wind related outages.	6/4/2012 – 6/5/2012	93,735	22		N
8	On 12/17 a weakening front moved through the Service Area bringing rain showers and breezy southerly winds up to 35-40 mph across the Sacramento Valley. Showers progressed into the southern San Joaquin overnight into 12/18. Post-frontal northwest winds then developed across the San Joaquin Valley, with gusts up to 35 mph observed at Fresno.	12/17/2012 – 12/18/2012	83,063	18		N
9	A Pacific storm system and associated cold front and swept through the north half of the PG&E Service Area. The front brought brisk south winds of 30 to 40 mph, with higher gusts over elevated terrain. During the afternoon, thunderstorms formed along the north coast and northern Sacramento Valley in the post-frontal environment.	3/31/2012	68,165	21		N
10	Non weather related event.	7/21/2012	47,182	30		N

* **Note:** Values exclude single distribution line transformer and planned outages.

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2012

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2012. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2012

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	ROB ROY 2105	1
EAST BAY	NORTH TOWER 2201	8
HUMBOLDT	EEL RIVER 1101	87
HUMBOLDT	GARBERVILLE 1102	637
HUMBOLDT	RIO DELL 1102	16
NORTH BAY	MONTICELLO 1101	10
NORTH BAY	SILVERADO 2102	72
NORTH VALLEY	JACINTO 1101	3
PENINSULA	WOODSIDE 1101	70
SACRAMENTO	DIXON 1103	13
SAN JOSE	MORGAN HILL 2106	4
SIERRA	ALLEGHANY 1101	98
SIERRA	EL DORADO P H 2101	24
SIERRA	OLIVEHURST 1105	7
SIERRA	TAMARACK 1101	23

SECTION 4

Attachment 1

Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2007-2012
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	CENTRAL COAST	211.7	1.849	2.731	114.5
2008	CENTRAL COAST	268.2	1.807	2.454	148.4
2009	CENTRAL COAST	242.6	2.086	3.120	116.3
2010	CENTRAL COAST	188.2	1.569	3.219	119.9
2011	CENTRAL COAST	410.8	1.495	1.781	274.8
5-Yr Ave	07-11 Avg	264.3	1.761	2.661	154.8
2012	CENTRAL COAST	148.6	1.298	2.364	114.5
	% Difference	-43.8%	-26.3%	-11.2%	-26.0%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	DE ANZA	94.1	0.865	1.136	108.8
2008	DE ANZA	108.4	0.991	1.529	109.3
2009	DE ANZA	104.4	0.890	1.612	117.2
2010	DE ANZA	118.3	0.986	1.276	120.0
2011	DE ANZA	79.0	0.717	1.482	110.2
5-Yr Ave	07-11 Avg	100.8	0.890	1.407	113.1
2012	DE ANZA	79.3	0.708	1.223	111.9
	% Difference	-21.4%	-20.4%	-13.1%	-1.1%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	DIABLO	120.3	1.095	1.579	109.9
2008	DIABLO	138.4	1.361	1.964	101.7
2009	DIABLO	148.2	1.348	1.171	110.0
2010	DIABLO	108.4	1.286	1.245	84.3
2011	DIABLO	73.2	0.898	1.376	81.5
5-Yr Ave	07-11 Avg	117.7	1.198	1.467	97.5
2012	DIABLO	104.0	1.22	1.405	85.3
	% Difference	-11.6%	1.9%	-4.2%	-12.5%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	EAST BAY	164.2	1.310	1.010	125.4
2008	EAST BAY	102.5	0.894	0.809	114.6
2009	EAST BAY	126.4	1.184	0.862	106.8
2010	EAST BAY	112.1	1.005	0.708	111.6
2011	EAST BAY	100.5	0.951	1.078	105.7
5-Yr Ave	07-11 Avg	121.1	1.069	0.893	112.8
2012	EAST BAY	108.8	1.374	1.336	79.2
	% Difference	-10.2%	28.6%	49.5%	-29.8%

Per D. 04-10-034
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Pacific Gas and Electric
Division Reliability Indices
2007-2012
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	FRESNO	229.0	1.771	2.237	129.3
2008	FRESNO	177.8	1.559	1.766	114.1
2009	FRESNO	136.5	1.225	1.814	111.4
2010	FRESNO	115.2	1.056	1.878	109.1
2011	FRESNO	162.7	1.112	2.014	146.4
5-Yr Ave	07-11 Avg	164.2	1.345	1.942	122.1
2012	FRESNO	98.5	1.053	2.360	93.5
	% Difference	-40.0%	-21.7%	21.5%	-23.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	HUMBOLDT	552.8	1.833	3.312	301.6
2008	HUMBOLDT	405.4	2.108	2.932	192.3
2009	HUMBOLDT	225.2	1.650	2.367	136.5
2010	HUMBOLDT	420.7	2.189	1.584	192.2
2011	HUMBOLDT	407.7	1.687	2.075	241.6
5-Yr Ave	07-11 Avg	402.4	1.893	2.454	212.8
2012	HUMBOLDT	335.3	1.718	4.665	195.2
	% Difference	-16.7%	-9.3%	90.1%	-8.3%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	KERN	121.7	1.123	1.580	108.3
2008	KERN	161.1	1.358	1.149	118.7
2009	KERN	105.4	1.177	1.446	89.6
2010	KERN	118.6	1.070	1.419	110.8
2011	KERN	165.0	1.258	1.600	131.1
5-Yr Ave	07-11 Avg	134.4	1.197	1.439	111.7
2012	KERN	89.2	0.987	1.221	90.4
	% Difference	-33.6%	-17.6%	-15.1%	-19.1%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	LOS PADRES	134.6	1.156	2.682	116.4
2008	LOS PADRES	184.6	1.591	2.909	116.0
2009	LOS PADRES	108.3	1.051	1.626	103.0
2010	LOS PADRES	107.3	1.158	1.756	92.6
2011	LOS PADRES	120.4	1.154	2.052	104.3
5-Yr Ave	07-11 Avg	131.0	1.222	2.205	106.5
2012	LOS PADRES	94.7	1.023	1.617	92.6
	% Difference	-27.7%	-16.3%	-26.7%	-13.0%

Per D. 04-10-034
Appendix A
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Pacific Gas and Electric
Division Reliability Indices
2007-2012
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	MISSION	82.1	0.829	1.021	99.1
2008	MISSION	96.7	0.914	1.467	105.8
2009	MISSION	89.1	0.741	0.893	120.3
2010	MISSION	105.2	0.932	0.728	112.8
2011	MISSION	67.6	0.795	0.692	85.1
5-Yr Ave	07-11 Avg	88.1	0.842	0.960	104.6
2012	MISSION	92.2	0.916	0.871	100.7
	% Difference	4.6%	8.8%	-9.3%	-3.7%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	NORTH BAY	117.0	1.088	1.782	107.6
2008	NORTH BAY	163.3	1.200	1.765	136.0
2009	NORTH BAY	140.2	1.153	0.944	121.6
2010	NORTH BAY	129.9	1.067	1.346	121.8
2011	NORTH BAY	200.4	1.329	1.222	150.8
5-Yr Ave	07-11 Avg	150.2	1.167	1.412	127.6
2012	NORTH BAY	137.6	0.910	1.949	151.1
	% Difference	-8.4%	-22.0%	38.1%	18.5%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	NORTH VALLEY	265.2	1.581	2.130	167.8
2008	NORTH VALLEY	317.0	1.683	3.460	188.4
2009	NORTH VALLEY	217.4	1.352	3.097	160.8
2010	NORTH VALLEY	222.1	1.341	1.893	165.7
2011	NORTH VALLEY	622.1	2.022	2.134	307.6
5-Yr Ave	07-11 Avg	328.8	1.596	2.543	198.1
2012	NORTH VALLEY	511.8	1.876	2.948	272.9
	% Difference	55.7%	17.6%	15.9%	37.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	PENINSULA	80.0	0.754	1.061	106.1
2008	PENINSULA	125.9	1.202	1.795	104.7
2009	PENINSULA	93.5	0.934	0.798	100.2
2010	PENINSULA	121.3	1.399	1.058	86.7
2011	PENINSULA	109.6	1.179	0.944	93.0
5-Yr Ave	07-11 Avg	106.1	1.094	1.131	98.1
2012	PENINSULA	98.0	1.133	1.708	86.5
	% Difference	-7.6%	3.6%	51.0%	-11.9%

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Pacific Gas and Electric
Division Reliability Indices
2007-2012
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SACRAMENTO	122.7	0.857	1.162	143.2
2008	SACRAMENTO	180.9	1.168	2.072	154.9
2009	SACRAMENTO	154.2	1.214	1.774	127.0
2010	SACRAMENTO	135.9	0.967	1.281	140.5
2011	SACRAMENTO	169.8	1.154	1.910	147.1
5-Yr Ave	07-11 Avg	152.7	1.072	1.640	142.5
2012	SACRAMENTO	159.3	1.407	1.904	113.2
	% Difference	4.3%	31.3%	16.1%	-20.6%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SAN FRANCISCO	99.1	1.027	0.386	96.5
2008	SAN FRANCISCO	56.2	0.678	0.271	82.9
2009	SAN FRANCISCO	67.1	0.786	0.096	85.3
2010	SAN FRANCISCO	46.6	0.609	0.077	76.5
2011	SAN FRANCISCO	45.9	0.553	0.215	83.0
5-Yr Ave	07-11 Avg	63.0	0.731	0.209	84.8
2012	SAN FRANCISCO	48.4	0.603	1.042	80.3
	% Difference	-23.2%	-17.5%	398.6%	-5.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SAN JOSE	99.2	0.944	1.009	105.0
2008	SAN JOSE	91.0	0.794	1.078	114.6
2009	SAN JOSE	76.6	0.779	0.801	98.3
2010	SAN JOSE	70.8	0.765	0.543	92.6
2011	SAN JOSE	111.3	0.965	0.807	115.3
5-Yr Ave	07-11 Avg	89.8	0.849	0.848	105.2
2012	SAN JOSE	82.9	0.822	0.985	100.9
	% Difference	-7.7%	-3.2%	16.2%	-4.1%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SIERRA	196.7	1.431	1.684	137.5
2008	SIERRA	243.0	1.630	1.516	149.1
2009	SIERRA	539.7	1.644	1.434	328.4
2010	SIERRA	480.9	1.528	1.214	314.7
2011	SIERRA	808.0	1.948	2.552	414.7
5-Yr Ave	07-11 Avg	453.7	1.636	1.680	268.9
2012	SIERRA	214.7	1.372	3.139	156.4
	% Difference	-52.7%	-16.1%	86.8%	-41.8%

Per D. 04-10-034
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Pacific Gas and Electric
Division Reliability Indices
2007-2012
(Excluding Major Events)

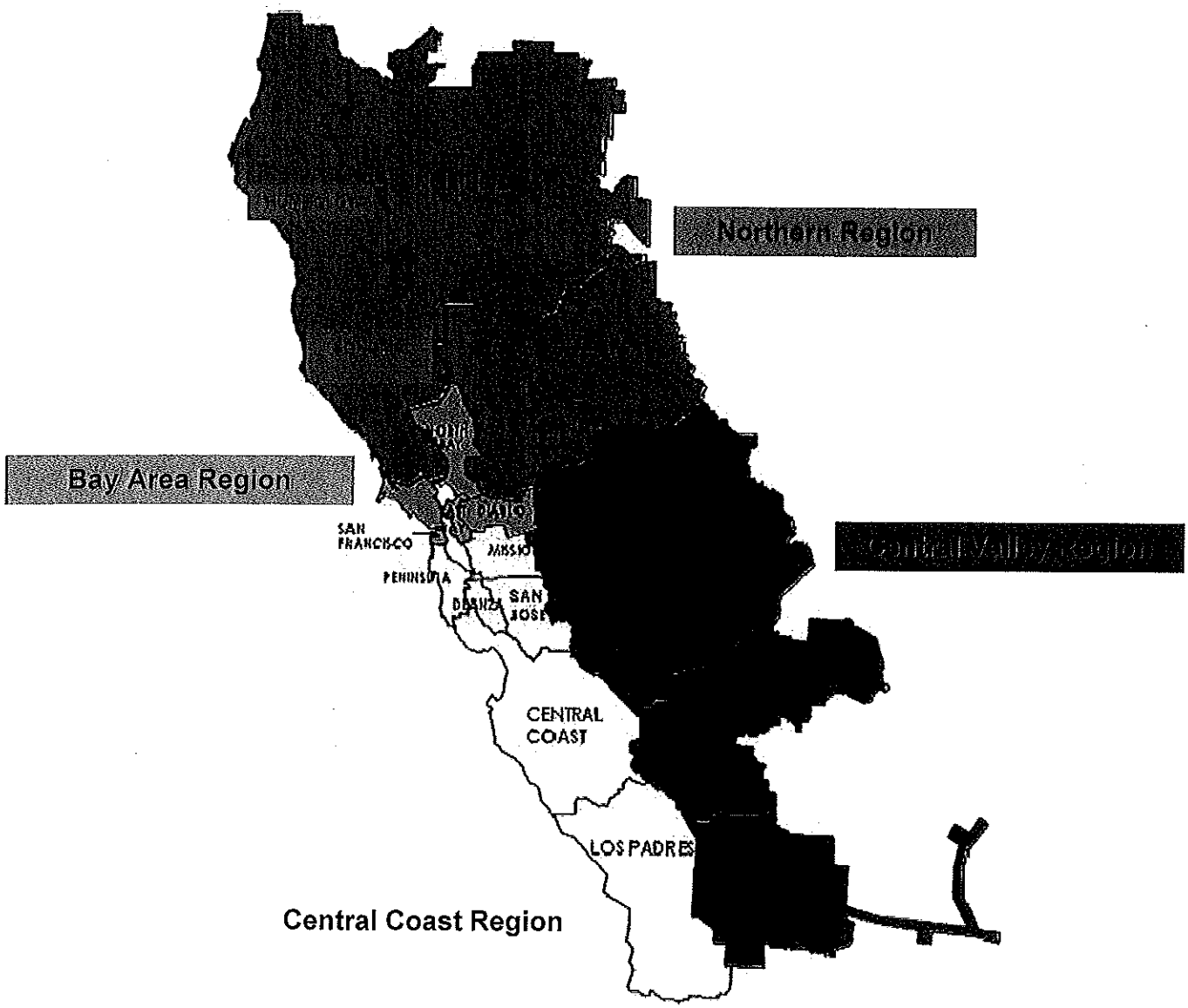
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SONOMA	157.6	1.226	1.768	128.5
2008	SONOMA	155.2	1.104	0.922	140.5
2009	SONOMA	167.8	1.205	1.458	139.2
2010	SONOMA	159.5	1.169	0.833	136.4
2011	SONOMA	117.3	0.933	1.393	125.7
5-Yr Ave	07-11 Avg	151.5	1.127	1.275	134.1
2012	SONOMA	204.7	1.097	2.030	186.6
	% Difference	35.1%	-2.7%	59.2%	39.2%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	STOCKTON	183.6	1.636	1.827	112.2
2008	STOCKTON	167.8	1.155	1.800	145.2
2009	STOCKTON	255.5	1.469	2.935	173.9
2010	STOCKTON	283.6	1.395	1.488	203.3
2011	STOCKTON	471.9	1.754	1.188	269.0
5-Yr Ave	07-11 Avg	272.5	1.482	1.848	180.7
2012	STOCKTON	163.0	1.156	2.099	141.0
	% Difference	-40.2%	-22.0%	13.6%	-22.0%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	YOSEMITE	226.5	1.606	1.412	141.1
2008	YOSEMITE	290.4	1.616	1.561	179.7
2009	YOSEMITE	223.9	1.375	1.655	162.9
2010	YOSEMITE	424.0	1.662	2.671	255.1
2011	YOSEMITE	598.6	1.699	2.406	352.2
5-Yr Ave	07-11 Avg	352.7	1.592	1.941	218.2
2012	YOSEMITE	145.8	1.294	4.176	112.6
	% Difference	-58.7%	-18.7%	115.1%	-48.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2007	SYSTEM	159.9	1.249	1.565	128.0
2008	SYSTEM	166.7	1.254	1.634	132.9
2009	SYSTEM	163.1	1.193	1.474	136.7
2010	SYSTEM	168.6	1.167	1.311	144.4
2011	SYSTEM	236.0	1.195	1.434	197.6
5-Yr Ave	07-11 Avg	178.9	1.212	1.484	147.9
2012	SYSTEM	138.9	1.118	1.918	124.3
	% Difference	-22.3%	-7.7%	29.3%	-16.0%

SECTION 5

Attachment 2

PG&E Service Territory Map

PG&E Service Territory



SECTION 6

Attachment 3

Summary list of Excludable Major Events per D. 96-09-045

Date	Description	Reason
1/1/2011-1/4/2011	A system of strong storms that began in December 2010 carried through into the beginning of 2011 bringing heavy winds and rain.	Declared State of Emergency
3/17/2011 -3/22/2011	A series of cold and powerful storms moved through the Service Area with the majority of outages resulting from low snow and gusty winds. The bulk of outage activity occurred overnight Sat 19th to Sun 20th as strong southeasterly wind gusts were observed in many locations (SF Apt 45 mph, Stockton 44 mph, Redding 45 mph, Bakersfield 40 mph). Excessive low elevation snowfall caused significant outage activity. Yosemite Division was hard hit with low snow (snow totals - 38" reported at 4200' above Oakhurst)	Declared State of Emergency
3/24/2011 – 3/27/2011	After a short respite from inclement weather, another strong and cold storm moved into the Service Area on March 24th. Once again, strong southerly wind gusts were observed (SF Apt 38 mph, Oakland 37 mph). Low elevation snow was the main adverse weather issue with Sierra, North Valley, Stockton, and Yosemite Divisions hard hit with low snow. (snow totals - 13" in Shingletown, 25" at 3700' along Highway 88, 34" at the 4200' above Oakhurst)	Declared State of Emergency
1/18/2010 – 1/24/2010	A strong jet stream developed over the Eastern Pacific, which spawned a series of outage producing weather events that included: - Three impulses of strong winds; gust above 50 mph each day (Jan 18, 19, 20) - Periods of moderate to heavy rainfall (Jan 18, 19, 20, 21) - Bands of thundershower activity (several thousand strikes Jan 18-21) - Heavy snowfall at low elevations of the Sierra Nevada (Jan 21, 22)	10% customer criteria
10/13/2009 – 10/14/2009	A strong early season storm affected the entire service area with many stations reporting wind gusts over 50 mph (57 mph at Ft. Funston (SF), 56 mph at Fairfield, 55 mph at Oroville, 51 mph at Monterey). Single day rainfall totals ranged between two and five inches at many locations (4.54 in. at Watsonville, 4.27 in. at Fairfield, and 3.66 in. at Napa). National Weather Service records indicate this storm was the strongest October rain and wind event since 1962.	10% customer criteria
1/3/2008 – 1/6/2008	The strongest storm system since December 1995 affected the entire service area on Jan 4. Wind gusts exceeded 65 mph at many low elevation sites throughout the service area (Redding 70 mph, Beale AFB 69 mph, Sacramento Apt. 66 mph, Pt San Pablo 83 mph), with some coastal hills and foothill sites gusting to over 80 mph (Los Gatos, elev. 2000 ft. 105 mph, Big Rock , Marin Co. elev. 1500 ft. 83 mph). Rainfall totals on Jan 4 ranged up to 4 inches with storm totals above 6 inches in the North Bay counties. Multiple lightning strikes were reported on Jan 4 and 5	10% customer criteria
12/26/06 – 12/28/06	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28.	10% customer criteria
07/21/06 – 07/27/06	A severe and long lasting heat wave affected the service area. In many locations, three day average temperatures were the highest recorded in over 50 years.	Declared State of Emergency
04/04/06 – 04/05/06	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall and moderately gusty winds in the 20-35 mph range.	Declared State of Emergency
03/09/06 – 03/14/06	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area.	Declared State of Emergency
03/02/06 – 03/05/06	During this four day period several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on Mar 3, especially affecting the San Joaquin Valley.	Declared State of Emergency
02/26/06 - 02/28/06	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area.	Declared State of Emergency
01/03/2006 - 01/05/2006 --- 12/30/2005 - 01/02/2006	A series of strong storms struck the service area The Dec 30 event was strongest in the north. The Dec 31 event affected the entire service area. An additional one to three inches of rain fell across northern and central California on Dec 31.	Declared State of Emergency --- 10% customer criteria
12/18/2005 - 12/20/2005	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Many coastal locations received between one to three inches of rain.	Declared State of Emergency
08/11/2004 - 08/16/2004	North Valley Division wildfires.	Declared State of Emergency
12/22/2003	Los Padres Division earthquake.	Declared State of Emergency
12/13/2002 - 12/21/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria
11/07/2002 - 11/08/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria

SECTION 7

Attachment 4

System Indices for the Last 10 Years (2003-2012) Based in IEEE 1366

Table A - IEEE 1366 Method – T&D System

(Excludes 2.5 Beta Days, Iso, Planned and Transformer Only Outages)				
Year	SAIDI	SAIFI	MAIFI	CAIDI
2003	162.5	1.288	1.745	126.2
2004	152.2	1.179	1.568	129.1
2005	157.0	1.266	1.663	124.0
2006	168.4	1.349	1.573	124.8
2007	142.3	1.199	1.516	118.7
2008	153.4	1.197	1.592	128.1
2009	131.3	1.112	1.391	118.1
2010	127.7	1.097	1.252	116.4
2011	107.4	0.960	1.169	111.9
2012	108.9	1.025	1.797	106.2

Table B - IEEE 1366 Method – Distribution System

(Excludes 2.5 Beta Days, Iso, Planned and Transformer Only Outages)			
Year	SAIDI	SAIFI	CAIDI
2003	147.6	1.173	125.9
2004	140.9	1.074	131.2
2005	137.9	1.120	123.1
2006	151.6	1.196	126.8
2007	128.8	1.089	118.3
2008	137.4	1.101	124.8
2009	121.4	1.027	118.2
2010	115.8	1.000	115.8
2011	96.1	0.863	111.4
2012	98.7	0.932	105.8

Table C - IEEE 1366 Method – Transmission System

(Excludes 2.5 Beta Days, Iso, Planned and Transformer Only Outages)			
Year	SAIDI	SAIFI	CAIDI
2003	14.9	0.115	129.3
2004	11.0	0.104	106.5
2005	19.1	0.146	130.5
2006	16.7	0.153	109.5
2007	13.5	0.109	123.3
2008	15.8	0.096	163.7
2009	9.9	0.085	117.3
2010	11.9	0.097	123.7
2011	11.2	0.095	117.7
2012	10.2	0.092	110.4

The totals shown in Tables B and C may not exactly match the values in Table A due to the following:

- Generation related outages are included in the first table but not in Tables B and C;
- There are database limitations related to the exclusion process when separating the outage data associated with the transmission and distribution systems.

The MAIFI information is not included in Tables B and C since the existing automatic recording (EON) devices do not distinguish between the two systems.

SECTION 8

Attachment 5

Historical (2002-2011) Outage Information from Prior Reports (the noted reference numbers are from the earlier reports)

A. Ten Largest Outage Events

B. Histograms of Events Meeting the CPUC Definition of an Excludable Major Event

C. Customers Experiencing >12 Sustained Outages

SECTION 8

Attachment 5

SECTION A

Ten Largest Outage Events

Table 5 - Ten Largest 2011 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A series of cold and powerful storms moved through the Service Area with the majority of outages resulting from low snow and gusty winds. The bulk of outage activity occurred overnight Sat 19th to Sun 20th as strong southeasterly wind gusts were observed in many locations (SF Apt 45 mph, Stockton 44 mph, Redding 45 mph, Bakersfield 40 mph). Excessive low elevation snowfall caused significant outage activity. Yosemite Division was hard hit with low snow (snow totals - 38" reported at 4200' above Oakhurst)	Mar 17 - 22	581,949	256	1,839**	Y-Partial (See Table 4)
2	After a short respite from inclement weather, another strong and cold storm moved into the Service Area on March 24th. Once again, strong southerly wind gusts were observed (SF Apt 38 mph, Oakland 37 mph). Low elevation snow was the main adverse weather issue with Sierra, North Valley, Stockton, and Yosemite Divisions hard hit with low snow. (snow totals - 13" in Shingletown, 25" at 3700' along Highway 88, 34" at the 4200' above Oakhurst)	Mar 24 – 27	464,767	504	1,839**	Y-Partial (See Table 4)
3	A series of cold storms moved across the Service Area starting Valentines day until Feb 19. On the 17th very cold air filtered into the region lowering snow levels enough to create low snow related outages across the Coast Ranges of Humboldt Divisions, and down the entire Sierra Nevada foothills. The hardest hit divisions were Humboldt, Yosemite, and Sierra. (snow totals - 14" in Shingletown, 38" at 3700' on Highway 88, 12" at 2600' in Humboldt County). Snow recorded down to 500 feet in Humboldt.	Feb 15 – 19	357,802	151		N
4	High pressure in the Great Basin and low pressure off the southern California coast set the stage for strongest northeast wind event to hit the Service Area in the last 20 years. Gusts up to 50 mph were common in the Sierra with the highest gust of 94 mph recorded on Mt. Elizabeth in the Yosemite division. Winds were quite strong in the Valley as well (Stockton 52 mph, Redding 40 mph, Fresno 36 mph)	Nov 30 – Dec 1	325,942	131		N
5	A strong and cold storm affected the entire Service Area with low snow falling in the Northern Region and gusty southerly winds and heavy rains further east and south. The hardest hit divisions were Humboldt, North Valley, and Sierra. (snow totals – 18" in Shingletown, 20" in Susanville, 19" in Grass Valley). Snow recorded down to 500 feet in Humboldt.	Feb 24 - 25	187,851	152		N
6	An early season storm moved through the Service Area bringing moderate southerly winds and heavy precipitation rates. In Ukiah, more than a half inch of rain fell within one hour in the early morning. The Central Valley Region experienced the most outages. These were mainly pole fires/flashover caused by the first rain to fall in the area after months of prolonged dry weather.	Oct 5	100,357	24		N
7	Widespread thunderstorm activity broke out across the southern part of the Service Area early in the morning with the biggest impacts in Fresno and Kern divisions. The Bakersfield area in Kern was hit particularly hard by lightning, with Kern Division recording 3833 lightning strikes for the day.	Sept 10	77,443	69		N
8	A late season cold storm moved through the Service Area with low snow outage conditions across divisions in the Sierra Nevada, especially the Sierra Division. (8" of snow at 3700' along Highway 88) Thunderstorms and associated lightning also broke out across the Central Valley. Impacts were minimal in the Bay Area and Central Coast Regions.	May 15	62,863	30		N
9	A non-weather related outage day with maximum temperatures along the Central Valley in the mid 80s. The outage count was only slightly above average for a June day; however, a large number of customers in the East Bay were affected by two distribution substation outages.	Jun 12	50,028	15		N
10	The first warm day of the spring was observed in many areas. San Jose had a high of 84. This could have contributed to the above average outage total. No other adverse weather was reported. The largest impacts were recorded in the San Francisco and San Jose Divisions.	Apr 1	44,177	6		N

* **Note:** Values exclude single distribution line transformer and planned outages.

** During the course of the March 17-27, 2011 storms, approximately 1,839 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 110 vegetation crews, 10 contract crews (approximately 200 individuals), and 36 mutual aid crews (approximately 175 individuals) were utilized to supplement existing resources.

Table 4 - Ten Largest 2010 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A strong jet stream developed over the Eastern Pacific, which spawned a series of outage producing weather events that included: - Three impulses of strong winds; gust above 50 mph each day (Jan 18, 19, 20) - Periods of moderate to heavy rainfall (Jan 18, 19, 20, 21) - Bands of thundershower activity (several thousand strikes Jan 18-21) - Heavy snowfall at low elevations of the Sierra Nevada (Jan 21, 22)	Jan 18-24	1,169,513	497	3,830 **	Y
2	A strong storm system with several impulses moved through the entire Service Area during the Dec 17 – 20 period bringing gusty winds and heavy rain. Wind gusts during the period: 43 mph at Stockton, 43 mph at Salinas, 46 mph at SFO, 43 at Red Bluff.	Dec 17-20	215,116	120		N
3	A series of cold storms brought significant snow to low elevations in the Sierra Nevada foothills. The snow came early in the season, when deciduous trees still retained most of their leaves. Excessive snow loading occurred on trees causing large limbs to break off and fall onto power lines. Snowfall amounts ranged from near 1 foot at the 3000' elevation, to several feet above 5000'. This storm produced the most low elevations snow in November in the last 15 years.	Nov 20-21	215,245	186		N
4	Storm system with strong south winds on Dec 28 (gusts to 47 mph at Marysville, 41mph at Stockton, 46 mph SFO) followed by strong northwest winds on Dec 29 (gusts to 46 mph at San Jose, 41 mph at Stockton, 43 at Bakersfield, 46 mph at SFO).	Dec 28-29	180,370	47		N
5	A late season storm brought rain, thunderstorms, and wind. Over 500 lightning strikes were recorded. The storm was particularly strong along the Central Coast and in the southern San Joaquin Valley. Reported wind gusts: 45 mph at Salinas, 46 mph at Santa Maria, 46 mph at Bakersfield 46.	Apr 11-12	122,050	73		N
6	Early season storm brought thunderstorms to Northern Region (over 1000 strikes recorded) along with rain to other parts of the Service Area. In many cases, this was the first rain of the season causing flashover outages.	Sep 8-10	114,402	60		N
7	An early season storm brought high winds and heavy rain to primarily the Northern Region. Redding recorded a peak wind gust of 49 mph. Santa Rosa recorded 4.75" of rainfall.	Oct 24	111,522	43		N
8	Storm system swept across the Service Area bringing rain and gusty winds. Reported wind gusts: 41 mph at Salinas, 41 mph at Bakersfield.	Dec 4-5	98,041	21		N
9	Heat wave conditions resulted in the hottest two days of the summer. Maximum temperatures exceeded 110 in portions of the Central Valley (111 at Bakersfield on 8/25). Maximum temperatures between 100 and 110 were reported both days at many coastal valley areas (109 at Ukiah on 8/25, 107 at Santa Rosa on 8/24, 105 at Livermore on 8/25).	Aug 24-25	97,616	82		N
10	Heat wave affected the service area, on both days Central Valley maximum temperatures ranged between 100 and 110, maximum temperatures above 100 were reported in coastal valleys on 6/27.	Jun 27-28	87,751	38		N

Note:

* Note: Values exclude single distribution line transformer and planned outages

** During the course of the January 18, 2010 Storm approximately 3,830 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, gas service representatives, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 1000 vegetation workers and 60 contract crews (approximately 360 individuals) were utilized to supplement existing resources.

Table 4 - Ten Largest 2009 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A strong early season storm affected the entire service area with many stations reporting wind gusts over 50 mph (57 mph at Ft. Funston (SF), 56 mph at Fairfield, 55 mph at Oroville, 51 mph at Monterey). Single day rainfall totals ranged between two and five inches at many locations (4.54 in. at Watsonville, 4.27 in. at Fairfield, and 3.66 in. at Napa). National Weather Service records indicate this storm was the strongest October rain and wind event since 1962.	10/13--10/14	617,589	244**	4,400 ***	Y
2	A strong cold front produced significant snowfall on Feb. 13 in the 1500-3000 ft. range of the northern and central Sierra foothills (up to 2 feet of snow at 3000 ft. and @ 1 foot at 2000 ft). A second storm followed on Feb.15 producing widespread heavy rain and strong wind gusts to the entire Service Area (67 mph at Valley Ford, 59 mph at Oroville, 50 mph at Redding, and Ft. Funston (SF), 47 mph at Salinas, 43 mph at San Luis Obispo. A third storm on Feb 16 delivered additional rainfall and wind gusts in the 30 to 40 mph range at several locations.	2/13-2/17	340,582	107	Not Requested	N
3	A large cluster of thunderstorms produced widespread lightning activity in the Bay Area and Sacramento Valley on Sep. 12. The lightning activity was followed by a weak weather front the next day that produced the first light rain of the season over much Northern California resulting in flashover related outages.	9/12-9/14	190,671	92	Not Requested	N
4	A strong cold front produced significant snowfall at the 1000-3000 ft. range of the Sierra foothills (up to 2 feet of snow was observed at 3000 ft., @ 1 foot at 1500 ft.) Light snow was reported at locations in the Central Valley.	12/7	147,630	113	Not Requested	N
5	Strong northerly winds developed across the entire Service Area with the gusts in the 45 to 55 mph range in the Bay Area and Sacramento Valley (52 mph at Fairfield, 49 mph at Sacramento, 45 mph at Red Bluff)	11/28	119,504	84	Not Requested	N
6	Strong north to northwest winds in the 40 to 60 mph range followed the passage of a weak weather front through the service area (58 mph at Ft. Funston (SF), 58 mph at SF Airport, 50 mph at San Carlos, 46 mph at Stockton)	4/14	116,406	45	Not Requested	N
7	An area of low pressure produced a large outbreak of thunderstorms with widespread lightning overnight on Jun. 3, continuing into the morning of Jun. 4.	6/3-6/4	98.187	38	Not Requested	N
8	Strong north to northwest winds in the 45 to 55 mph range were recorded throughout the Sacramento and San Joaquin Valleys following the passage of a weak weather front (52 mph at Merced, 49 mph at Stockton, 47 mph at Modesto and Madera, 46 mph at Red Bluff, 45 mph at Fresno).	10/27	70,901	20	Not Requested	N
9	A winter storm accompanied by periods of moderate to heavy rainfall and scattered thundershower activity crossed the service area. Rainfall totals of up to 2 inches were reported.	12/12	54,111	41	Not Requested	N
10	Widespread thunderstorm activity resulted in several hundred lightning strikes in Areas 4, 5, 6 and 7.	5/28	52,705	22	Not Requested	N

Note:

* Values exclude single distribution line transformer and planned outages

** This duration was due to the lack of access caused by flooding in the Stockton area. Access was granted after waters receded. Work was the completed and service was restored to the six customers remaining out of service.

*** Approximately 4,400 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 400 vegetation workers and 42 contract crews (approximately 210 individuals) were utilized to supplement existing resources.

Table 4 - Ten Largest 2008 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Strongest storm system since December 1995 affected the entire service area on Jan 4. Wind gusts exceeded 65 mph at many low elevation sites throughout the service area (Redding 70 mph, Beale AFB 69 mph, Sacramento Apt. 66 mph, Pt San Pablo 83 mph), with some coastal hills and foothill sites gusting to over 80 mph (Los Gatos, elev. 2000 ft. 105 mph, Big Rock , Marin Co. elev. 1500 ft. 83 mph). Rainfall totals on Jan 4 ranged up to 4 inches with storm totals above 6 inches in the North Bay counties. Multiple lightning strikes were reported on Jan 4 and 5.	1/3 – 1/6	1,631,765	290	7,130 **	Y
2	A series of cold winter storms crossed the state. The first system (Jan 24-25) delivered gusty winds (generally in the 30 to 50 mph range), up to 2 inches of rain and snow below 2000 ft. A second system focused on the southern half of the service territory brought additional rain and thundershower activity along with even gustier winds (Santa Maria 67 mph, Bakersfield 49 mph).	1/24 – 1/27	303,168	172	Not Requested	N
3	A storm system with wind gusts in the 25 to 40 mph range crossed the state. Most locations reported under one inch of rain with a few coastal stations reaching two inches total.	10/31 – 11/1	189,811	50	Not Requested	N
4	The first rains of the winter season were accompanied by winds generally gusting from 25 to 35 mph (Red Bluff 44 mph). A large number of flashover incidents were likely triggered by the combination of light rain and power lines heavily sooted after the widespread summer season wildfires.	10/3 – 10/4	147,703	65	Not Requested	N
5	Gusty winds with periods of moderate rain accompanied a weather system that crossed the state. Wind gusts were generally in the 30 to 50 mph range (SF Airport 47 mph, Stockton 47 mph, Merced 45 mph).	2/2 – 2/3	121,865	65	Not Requested	N
6	Gusty winds from this storm were strongest in the southern half of the service area. Gusts between 50 and 55 mph were reported at SF Airport, Salinas, Santa Maria, Red Bluff and Bakersfield.	2/23 – 2/24	113,086	101	Not Requested	N
7	A weather front brought gusty winds and periods of moderate to heavy rain to the state. Post-frontal west to northwest wind gusts were strongest in the Bay Area (SF Apt 54 mph, Hayward 63 mph, Oakland 47 mph, Salinas 51 mph)	12/25	111,134	102	Not Requested	N
8	Gusty north winds generally in the 25 to 35 mph range were reported in the north. San Joaquin and Central Coast winds gusted from 30 to over 50 mph (Santa Maria 41 mph, Stockton 45 mph, Madera 52 mph, Merced 47 mph)	5/22	105, 635	102	Not Requested	N
9	Gusty north winds developed on the evening of Feb 13 and continued through Feb 14. Winds were generally in the 30 to 45 mph range, with strongest gusts in the Central Valley (Redding 48 mph, Marysville 48 mph, Sacramento 47 mph)	2/13 – 2/14	98,788	47	Not Requested	N
10	Gusty north winds between 20 and 35 mph resulted in a record breaking early season heat wave. Bay Area and Central Valley temperatures ranged from 100 to 105F	5/15	84,659	28	Not Requested	N

Note:

* Values exclude single distribution line transformer and planned outages

** Approximately 6,000 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 300-350 vegetation crews (approximately 700 individuals), 70 contract crews (approximately 450 individuals) and 28 mutual assistance crews (approximately 170 individuals) from Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), City of Gridley, City of Redding, and Sierra Pacific Power were utilized to supplement existing resources

Table 4 - Ten Largest 2007 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Gusty winds and rain Feb 26 and 27. Peak wind speeds of 30-45 mph Bay Area (Oakland 40 mph, SF approximately 43 mph). Interior valley reported 25-40 mph gusts, strongest in the San Joaquin Valley (Fresno 38 mph). Rainfall generally below one inch. Snow levels lowered to 2000 ft as far south as the San Joaquin Valley on Feb 27.	2/26 - 2/28	266,764	214 **	Not Requested	N
2	Heat wave centered around July 5. Maximums between 105-115 degrees in the interior valleys, 95-110 degrees in the coastal valleys.	7/4 - 7/7	172,778	20	Not Requested	N
3	Widespread lightning with subtropical rain. Lightning all three days but extensive strikes on Aug 30 over Areas 3 and 4	8/29 - 8/31	149,883	75	Not Requested	N
4	Early summer hot temperatures in the interior; maximums 100-105 degrees in the Central Valley, upper 80's to low 100's in the coastal valleys. North winds 20-25 mph	6/14 - 6/16	137,977	27	Not Requested	N
5	Light rain across Central and North Areas. Winds generally below 25 mph. Lightning on Sep 21 in the evening continuing through Sep 22 mainly in San Joaquin Valley and foothills. Many outages reported due to insulator flashover resulting from light rain.	9/22	100,606	33	Not Requested	N
6	Rain, gusty winds and scattered thundershowers Feb 22. Peak winds at Redding - 51 mph on the Feb 21 and 44 mph on Feb 22nd. Bay Area gusts from 25-35 mph (Oakland 37 mph) on the Feb 22nd. Over 2 inches of rain in Eureka, less than one inch most other locations	2/22 - 2/23	96,420	79	Not Requested	N
7	Light rain far north, winds below 25 mph. Cold morning temperatures.	1/16	91,695	24	Not Requested	N
8	Thunderstorms / lightning in the Sierra foothills of Area 4 and 5. Afternoon temperatures between 95-100 degrees in the Central Valley	7/24	70,602	29	Not Requested	N
9	Light rain across the Service Area. Many outages reported due to insulator flashover resulting from light rain.	10/10	62,434	34	Not Requested	N
10	Moderately strong winds occurred across the Central and Northern Service Areas with gusts up to 50 mph.	12/27	59,594	20	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages
** Note: Reflects an outage at two customer locations in a remote area that experiences deep snow with limited access.

Table 5 - Ten Largest 2006 Outage Events

Rank	Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A severe and long lasting heat wave affected the service area. In many locations three day average temperatures were the highest recorded in over 50 years. Consecutive days with maximum temperatures over 110 F were recorded throughout the Central Valley, and many coastal valleys reported consecutive days with maximum temperatures over 105 F. Sacramento set an all time record of 11 days in a row with maximum temperatures over 100 F. An unusual feature of this heat wave was high nighttime temperatures. Sacramento, San Jose and Fresno set records for the highest minimum temperatures ever recorded.	7/21 - 7/27	651,217	119	Not Requested	Y See Table 4
2	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28. Southerly winds gusted from 45 to 55 mph in the Sacramento Valley and Bay Area on Dec 26th, accompanied by rainfall totals ranging from ½ to 3 inches. Gusty west to northwest winds were recorded after the front passed on Dec 27th. Bay Area wind gusts generally ranged from 45-60 mph, and gusts in the 35 to 50 mph range were reported in both northern and southern portions of the service area. North to northwesterly wind gusts in the 25 to 40 mph range continued into the afternoon of Dec 28th	12/26-12/28	528,496	125	2460	Y See Table 4
3	The storm of Jan 1-2 was a continuation of a series of storms that began at the end of the 2005. Gusts from 45 to over 60 mph were common in the Sacramento Valley and Bay Area; 35 to 55 mph along the Central Coast, and 30 to 45 mph in the San Joaquin Valley. Rainfall amounts ranging from ½ to 2 inches fell on grounds that had been saturated by a series of late December storms.	1/1 – 1/5 (12/30/05 -1/5/06)*	504,072 (1,101,718)	129 (155)	3522**	Y See Table 4
4	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area. Moderate to heavy rain accompanied the strong winds with up to four inches of rain reported along the north coast and in the northern interior. Bands of thunderstorms rolled through the service area on Feb 28.	2/26 – 2/28	331,813	45	Not Requested	Y See Table 4
5	Strong high pressure resulted in heat wave conditions over most of the service area. On June 22, temperatures ranged from 100 to 110 throughout the Central Valley, Bay Area and coastal valley temperatures ranged from 95 to 105. On Jun 23, a weak sea breeze cooled off the Bay Area slightly, but interior valley temperatures continued to climb resulting in readings generally between 105 and 115 through June 25 (117 @ Red Bluff on Jun 25)	6/22 – 6/25	164,582	31	Not Requested	N
6	The first significant wind and rain storm of the winter occurred during the Dec 8-10 period. Wind gusts generally ranged from 30 to 40 mph on Dec 8 and 9 (45 mph @ SF Apt, 45 mph @ Hanford); and from 25-35 mph on Dec 10 (38 mph @ Oakland, 37 mph @ Redding). Rainfall totals were generally under ½ inch on Dec 8 (0,58 at Santa Rosa), between ¼ and ¾ inch on Dec 9 (0.99 inches at Sacramento); and under ¼ inch on Dec 10. Thunderstorms were reported in the Sacramento Valley on Dec 9.	12/8 – 12/10	146,770	39	Not Requested	N
7	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area. On Mar 9, winds gusts ranged from 25 to 45 mph through most of the service area (46 mph @ SF Apt). Lightning mainly confined to coast areas on Mar 10, and coastal areas and San Joaquin Valley on Mar 11. Large accumulations of low elevation snow were reported in the foothills of the Central (10 inches at Angels Camp) and Southern Sierra (14 inches at 1500 ft.). In the coastal mountains between six and 12 inches was reported.	3/9 – 3/14	138,997	94	Not Requested	Y See Table 4
8	During this four day period, several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on March 3, especially affecting the San Joaquin Valley. Fresno reported a wind gust of 41 mph. Wind gusts above 40 mph were recorded in Humboldt County on March 4. The final weather front of this series occurred on Mar 5. Peak winds gusted to 55 mph along the north coast, and an additional one to three inches of rain was reported in parts of the Bay Area, North Coast and Sacramento Valley	3/02 – 3/05	113,235	66	Not Requested	Y See Table 4
9	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall (1.14 inches at Sacramento, 1.02 inches at Stockton) and moderately gusty winds in the 20-35 mph range. Lightning activity was strong in the northern and central San Joaquin Valley.	4/04 – 4/05	102,052	31	Not Requested	Y See Table 4
10	A weather front produced 40-45 mph wind gusts in the northern Sacramento Valley, 10 mph gusts elsewhere. Rainfall totals ranged from ¼ to one inch along the north coast and northern Sacramento Valley, less than ¼ inch elsewhere.	1/28	85,089	73	Not Requested	N

Note: Values exclude single distribution line transformer and planned outages. The events listed as CPUC Major Events only include the outages for excludable counties. otherwise the events include the system values. * The values in parenthesis reflect the totals for the entire event from Dec 30, 2005 to Jan 5, 2006 as noted in Section 1.

**Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 5 - Ten Largest 2005 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A series of strong storms struck the service area (these storms were preceded by several wet events that affected the North Bay and North Coast). The Dec 30 event was strongest in the north. The Eureka NWS office reported 90+ mph winds in the Humboldt Bay area and widespread gusts in excess of 70 mph. Northern Sacramento Valley locations reported strong wind gusts; e.g. 53 mph at Redding. North Coast and North Bay rainfall amounts were in the 3 to 5 inch range. The Dec 31 event affected the entire service area. Wind gusts above 50 mph were recorded in all areas except the Southern San Joaquin Valley; 59 mph at Red Bluff, 58 mph at Arcata, 51 mph at Santa Rosa; 53 mph at Sonoma; 59 mph at Rio vista; 77 mph at Pt San Pablo (SF Bay); 62 mph at Ft. Funston (SF); 60 mph at SF Airport; 52 mph at Los Banos. An additional one to three inches of rain fell across northern and central California on Dec 31.	12/30 – 12/31	597,646	155	3522**	Y
2	A strong weather front delivered wind gusts over 50 mph at many locations in the southern 2/3 of the service area; 53 mph at Beale AFB (Marysville), 53 mph at Mather AFB (Sacramento), 48 mph at SF Airport, 53 mph at Bellota, 51 mph at Stockton, 55 mph at San Luis Obispo, 56 mph at Stockdale (Bakersfield). Rainfall totals were generally less than one inch.	01/07 – 01/09	278,360	149	Not Requested	N
3	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Peak wind gusts included 50 mph at Valley Ford, 49 mph at Rio Vista, 55 mph at Ft. Funston, 53 mph at SF Airport, 49 mph at San Luis Obispo. Many coastal locations received between one to three inches of rain. The number of customer's affected (252,679) is a system total for December 18-20. However, PG&E excluded only the following divisions on the following days: December 18 (Diablo, East Bay, North Bay, North Coast, Peninsula, Sacramento, Stockton), December 19 (North Coast, Peninsula, Sacramento), December 20 (North Coast).	12/18 – 12/20	252,679	49	Not Requested	Y Noted in Table 4
4	A series of weather fronts affected the service area over this four day period resulting in a prolonged period of rainy and blustery weather. Some localized flooding was reported with rainfall totals in the two to four inch range. The strongest winds were on Mar 22 with peak gusts of 45 mph at SF Airport, 45 mph at Rio Vista, 44 mph at Sacramento, 43 mph at Redding and 33 mph at Fresno.	03/19 – 03/22	209,867	55	Not Requested	N
5	A weather front crossed the service area producing strong gusty winds in the Bay Area and Sacramento Valley. Peak gusts included 54 mph at Valley Ford, 51 mph at Table Mountain and Corning, 63 mph at Pt. San Pablo, 51 mph at Pleasanton, 64 mph at SF Airport, and 55 mph at Ft. Funston. Rainfall totals were generally between one and two inches in the North Bay and Sacramento Valley.	12/01 – 12/02	199,923	26	Not Requested	N
6	The series of storms that affected the service area on Dec 26-28 produced moderate rain and gusty winds (30-45 mph) in the north on Dec 26, heavy rain north (one to three inches) and gusty winds south; 44 mph at Stockton, 46 mph Bakersfield, 45 mph Santa Maria on Dec 27, and another one to two inches of rain north on Dec 28.	12/26 – 12/28	124,753	26	Not Requested	N
7	Transmission relay malfunction (Moraga-Oakland Station X, 115kV line #3).	11/20	116,513	9	Not Requested	N
8	A strong lightning storm developed a band of subtropical moisture that mainly affected the Bay Area, southern Sacramento Valley and San Joaquin Valley.	09/20	110,271	41	Not Requested	N
9	A weather front affected the central part of the service area bringing gusty winds and widespread shower activity. Strongest peak wind gusts were 44 mph at Salinas, 40 mph at Pleasanton, 38 mph at Bethel Island and 28 mph at Fresno. Thunderstorm activity was reported in the Bay Area, southern Sacramento Valley, and San Joaquin Valley, with numerous lightning strikes recorded.	02/21	105,652	37	Not Requested	N
10	A weak weather front crossed the service area followed by gusty northwesterly winds. Peak gusts were 37 mph at SF Airport, 36 mph at Eureka, 36 mph at Redding and 36 mph at Rio Vista. Rainfall totals were less than one-half inch.	10/15	85,802	37	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages

**Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 4 - Ten Largest 2004 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Two storms (Oct 17 and 19) moved through the service area. Wind gusts were generally between 24-50 mph (51 mph at Redding, 40 mph at Red Bluff, 37 mph at Napa) on Oct 17, and 35-60 mph on Oct 19 (51 mph Redding, 47 mph at Red Bluff, 51 mph at Marysville, 49 mph at San Francisco Airport, 55 mph at Bellota, 57 mph at San Luis Obispo). Rainfall totals were generally under ½ inch on Oct 17, but ranged from ½ to over 3 inches on Oct 19 (3.30 in. at Redding, 1.90 in. at Ukiah, 1.84 in. at Oakland, 1.89 in. at Santa Rosa)	10/15-10/20	522,213	104	N/A	N
2	A series of wet and windy storms crossed the service area during the last week of 2004. Many northern and central California locations received over 5 inches of rain, with totals above 10 inches at many coastal hill locations. Strong gusty winds, generally in the 25 to 45 mph range were reported on the 27th and early hours of the 28th, especially in the central and southern areas (45 mph at Marysville, 43 mph at Sacramento, 44 mph at Stockton, 46 mph at Santa Maria). Salinas and Ft Funston reported a gusts of 62 and 63 mph, respectively, on the morning of the 27th. The storm of Dec 30th delivered another round of strong winds with gusts generally in the 35 to 55 mph range in northern and central California (53 mph at Red Bluff, 51 mph at Redding, 59 mph at SF Airport, 45 mph at Oakland, 44 mph at Stockton, 39 mph at San Jose).	12/27-12/31	435,315	142	N/A	N
3	A strong weather front with gusty winds and heavy rain crossed the service area. Peak wind gusts in the northern and central portions of the service area generally ranged in the 35 to 65 mph range (58 mph at Arcata, 53 mph at Santa Rosa, 59 mph at Red Bluff, 64 mph at Cohasset, 56 mph at Marysville, 64 mph at Sacramento, 63 mph at San Pablo, 61 mph at Ft Funston, 57 mph at Bellota, 49 mph at Monterey, 49 mph at Templeton). Rainfall totals were generally in the 1-3 inch range, except under 1 inch in the San Joaquin Valley.	2/25-2/26	337,128	54	N/A	N
4	A strong weather front with gusty winds and heavy rain affected the northern half of the service area. Winds gusted from 35 to 65 mph in the Bay Area, Redwood and Northern Interior zones on February 17th (62 mph at SF Airport, 57 mph at Sunol, 50 mph at Pleasanton, 52 mph at Konocti, 45 mph at Santa Rosa, 57 mph at Cohasset, 47 mph at Redding. Rainfall amounts were 3-5 inches in the Redwood zone, 1-4 inches in the Northern Interior and 1-2 inches in the Bay Area.	2/16-2/19	220,162	24	N/A	N
5	A strong weather front with gusty winds and heavy rain affected the northern half of the service area late on Dec 6th and early Dec 7th. Winds gusted from 35 to 60 mph in lower elevation areas of the Redwood, Bay Area and Northern Interior zones, 15-40 mph elsewhere (60 mph at Redding, 51 mph at Valley Ford, 48 mph at Sacramento, 45 mph at Clayton, 47 mph at SF Airport, 49 mph at Ben Lomond, 46 mph at Pleasanton). Rainfall amounts ranged from 1-4 inches at lower elevations, 5-12 inches above 2000 ft elevation, in the northern half of the service area.	12/6-12/8	190,673	35	N/A	N
6	A strong weather front with gusty winds and heavy rain affected the northern half of the service area on Jan 1. Winds gusted from 35 to 60 mph at lower elevations in the Bay Area, Redwood and Northern Interior zones (59 mph at Redding, 56 mph at SF Airport, 54 mph at Sunol, 53 mph at Marysville, 47 mph at Pleasanton, 49 mph at Sacramento, 60 mph at Santa Rosa, 54 mph at Cohasset. Rainfall amounts were 1-3 inches in the Redwood zone, Northern Interior and Bay Area zones.	1/01	172,397	74	N/A	N
7	Gusty north winds developed over northern and central portions of the service area as a strong high pressure system developed. Peak wind speeds included 58 mph at Hopland, 51 mph in Santa Rosa, 47 mph at Sonoma. Peak gusts in the East Bay hills ranged from 50-60 mph	11/20-11/21	118,558	32	N/A	N
8	A moderate weather front, with peak winds of 25-40 mph and accompanied by rainfall totals between ½ and 1 ½ inches, affected the entire service area. Strongest wind gusts were in the northern Sacramento Valley (40 mph at Redding, 38 mph at Red Bluff) and the southern San Joaquin Valley (40 mph at Bakersfield, 38 mph at Hanford).	10/26	74,160	41	N/A	N
9	Transmission substation outage occurred in Central Coast Division.	12/10	61,821	4	N/A	N
10	3rd party dig-in to a transmission line in De Anza division.	10/1	58,591	13	N/A	N

* Note: Values exclude single distribution line transformer and planned outages

Table 4 - Ten Largest 2003 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
1	The first storm system of the fall season moved through the Service Area. Gusty southerly winds up to 30 mph developed in Northern and Central Service Area Zones on the 2nd. Gusty northwest winds occurred on the 4th. Widespread precipitation occurred in the Service Area with totals generally 1" in the mountains and 0.25" in the Central Valley.	11/02 – 11/04	184,849	26	N/A	N
2	A strong winter storm moved through the service area on December 29th. Peak winds ranged from 30 to 70 mph with the strongest gusts north of a Monterey/Madera line. Peak winds included Red Bluff 46 mph, Beale AFB (Marysville) 59 mph, Clayton 47 mph, Sacramento 55 mph, and Stockton 44 mph. One to five inches of rain fell in the northern half of the state. Heavy snowfall was reported at low elevation locations in the northern Sacramento Valley; 18 inches at North Redding, 8-14 inches in downtown Redding, 15 inches at Burney and 10-12 inches at Nevada City.	12/29	164,363	192	N/A	N
3	A strong late winter storm system moved through the Service Area. Two to six inches of precipitation fell in the northern half of the Service Area; 0.50" to 1.5" of precipitation fell in the southern half of the Service Area; the southern half of the state also experienced heavy rains with one to four inches in the LA Basin. Peak wind speeds included 51 mph at Redding; 44 mph at SFO; 40 mph at Sacramento; 35 mph in Fresno; and 31 mph at Santa Rosa. Two to three feet of snowfall was recorded in the Sierra Nevada Mountains at elevations above 5,000" during this three-day period.	03/13 – 03/15	160,863	29	N/A	N
4	A winter storm system moved through the Service Area during this two-day period. One to three inches of precipitation fell over the northern half of the Service Area. Snowfall totals in the northern half of the Sierra Nevada Mountains ranged from one to three feet with 16" at Alpine Meadows; 24" at Soda Springs; and 28" at Sugar Bowl. Peak wind speeds ranged from 20 to 40 mph with 39 mph at SFO; 29 mph at Sacramento and Fresno; and 24 mph at Santa Rosa.	12/09 – 12/10	147,128	144	N/A	N
5	A cold winter storm system moved through the Service Area during this two-day period. Precipitation totals included 2.34" at Redding; 1.38" at Santa Rosa; 0.83" at Sacramento; 0.70" in SFO; and 0.25 at Fresno. The storm was accompanied by numerous thunderstorms and gusty southerly winds, principally on the 8th. Peak wind speeds included 37 mph at SFO; 30 mph in Redding; 26 mph at Sacramento; and 24 mph at Santa Rosa.	11/08 – 11/09	141,666	46	N/A	N
6	A strong winter storm, accompanied by heavy rain and gusty southerly winds, moved through the Service Area. Peak wind speeds ranged from 30 to 65 mph with the strongest gusts in the Bay Area, Redwood Coast, and the Northern Interior. Peak wind speeds included 56 mph in Redding; 53 mph in SFO; 33 mph in Santa Rosa; 30 mph in Sacramento; and 23 mph in Fresno.	12/14	108,910	24	N/A	N
7	A strong earthquake in San Luis Obispo County (Paso Robles).	12/22	107,291	34	N/A	Y
8	The Mission Substation was de-energized due to a fire. The cause of the fire is still under investigation.	12/20	101,534	30	N/A	N
9	A cold, upper level low pressure system moved through the State, accompanied by numerous showers and thundershowers, bringing heavy snow to the mountains Six to ten inches of snow fell in Truckee and the Lake Tahoe Region with up to one and on-half feet recorded at higher elevations. Thunder, lightning and small hail was observed in the Bay Area and in the Central Valley from Red Bluff to Sacramento.	10/31	91,907	21	N/A	N
10	A surge of subtropical moisture resulted in an outbreak of summer season shower and thunderstorm activity through out the Service Area. While precipitation totals were insignificant, there were numerous reports of lightning activity from the evening of the 25th through the evening of the 26th.	08/26	80,159	42	N/A	N

* Note: Values exclude single distribution line transformer and planned outage

Table 4 - Ten Largest 2002 Outage Events

Rank	Description	Date	Number of Customer Interruptions*	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
1	During the December 13-21 storms the highest wind speeds were recorded on December 16 when peak winds ranged from 40 to over 80 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline sites along the North Coast and Bay Area. Peak winds over 40 mph were reported in the San Joaquin Valley on December 19. In the northern half of the service area between 5 and 15 inches of rainfall was reported, with over 20 inches of rain reported at some stations in the coastal hills north of the Bay Area and Northern Sierra foothills.	12/13 –12/21	1,973,806	543	>3,200**	Y
2	During the November 7-8 storms, peak wind speeds ranged from 30 to over 60 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline stations in the Bay Area. Storm rainfall totals generally ranged from one to three inches throughout the service area, with over five inches recorded at some stations in the coastal hills.	11/7 – 11/8	885,431	121	>3,200**	Y
3	A series of storm systems moved through the Service Area during this four day period. These storm systems were accompanied by strong gusty winds, especially on the 28th, late on the 30th, and early on the 31st. Peak wind speeds on the 28th included 54 mph in San Francisco, 44 mph in Oakland, 47 mph in Redding, and 43 mph in Bakersfield. Peak wind speeds on the 31st included 103 mph at Kregor Peak, 72 mph at Las Trampas Ridge, 54 mph in San Francisco, 54 mph in Santa Rosa, 49 mph in Concord, and 46 mph in Redding	12/28 – 12/31	356,505	146	Not Requested	N
4	A heat wave enveloped the entire Service Area beginning on July 8th. Temperatures in the interior valley remained above 100 Deg F through July 15th. The maximum temperatures on the 9th included 92 Deg F in Oakland, 90 in San Francisco, 103 in Santa Rosa, 102 in Concord, 107 in Livermore, 104 in Sacramento, 106 in Fresno. On the 10th, maximum temperatures reached 110 Deg F in Stockton and Sacramento and 115 in Redding. On the 11th, maximum temperatures included 109 in Ukiah, 112 in Redding, 106 in Fresno, and 109 in Bakersfield.	07/09 – 07/11	164,238	46	Not Requested	N
5	A cold front moved through the Service Area on the 14th and 15th accompanied by gusty west and northwest winds. Peak wind speeds included 52 mph in San Francisco, 52 mph at Los Banos, 43 mph in Redding, 41 mph at Stockton, 41 mph in Fresno, and 37 mph in Bakersfield.	04/14 – 04/15	97,105	25	Not Requested	N
6	Gusty north winds developed over northern and central portions of the Service Area as a strong high pressure system moved into the Great Basin. Peak wind speeds included 37 mph in San Francisco, 35 mph in Red Bluff, 38 mph in Redding, and 37 mph in Stockton.	02/28 – 03/01	93,922	44	Not Requested	N
7	An early summer heat wave affected the area with maximum temperatures in the interior valley in the mid-90s to near 100 deg F. Maximum temperatures on the 29th included 96 Deg F in Red Bluff, 95 in Redding, 94 in Stockton, and 94 in Fresno. Maximum temperatures on the 30th included 98 in Redding, 94 in Sacramento, 99 in Stockton, 101 in Fresno, and 99 in Bakersfield.	05/29-05/30	87,244	135	Not Requested	N
8	A Transmission system outage occurred in Diablo division.	11/19	59,023	7 Minutes	Not Requested	N
9	A storm system pushed through the Service Area on the 6th and 7th accompanied by one to two inches of rain and gusty southerly winds. Peak wind speeds included 37 mph in San Francisco, 43 mph in Red Bluff, and 38 mph in Stockton.	03/07	51.847	23	Not Requested	N
10	Gusty north winds occurred in the northern half of the Service Area with 39 mph at Red Bluff, 37 mph at San Francisco, 25 mph at Redding, and 24 mph at Stockton.	03/17	46,065	23	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages. Values reflect all customers in PG&E's service territory affected by outages for those dates.
** Note: Values are estimates of the number of PG&E electric field personnel working. These numbers do not include any non-PG&E personnel.

SECTION 8

Attachment 5

SECTION B

Histograms of Events Meeting the CPUC Definition of an Excludable Major Event

Of the ten largest events listed in Table 5, the following events met the CPUC definition of a major event under criteria (a) state of emergency declaration.

- March 17-22, 2011
- March 24-27, 2011

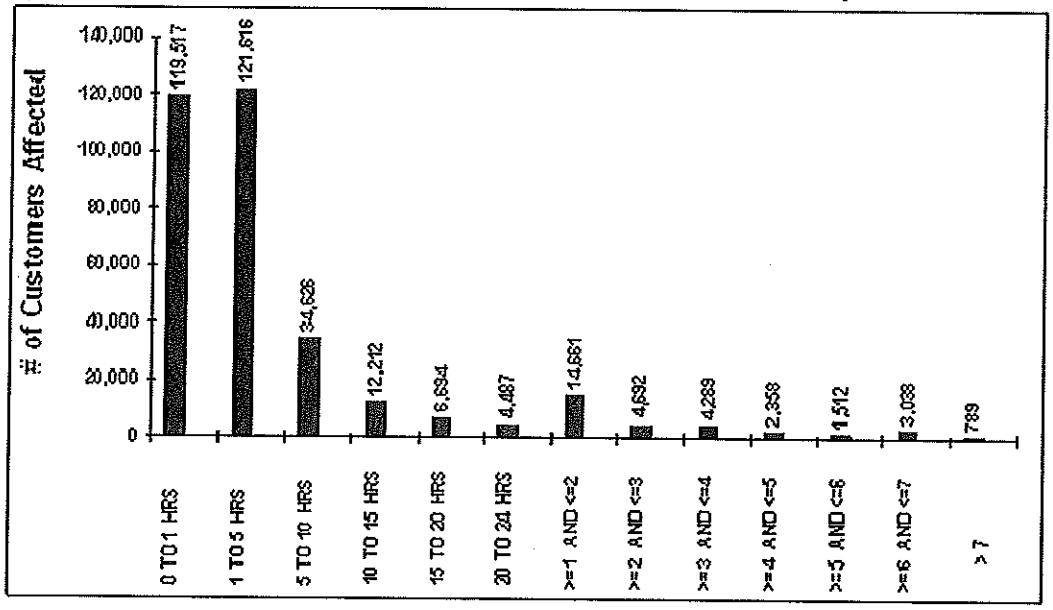
Although these storms have been identified as two separate consecutive-day events in Table 5, PG&E has combined them into one event in this report since it better represents the storm's impact on our customers. Table 6 below indicates the number of customers without service at periodic intervals for this combined event (March 17 – 27, 2011). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

NOTE: The number of customers affected shown in the histogram below shows 330,491 customers. However, 82 customers recorded in PG&E's OUTAGE database have been excluded from this table since they were vacant campsites without any campers / customers.

Table 6 / Figure 1 – 2011 Outage Event Duration Summary

3/17/2011 - 3/27/2011		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	119,517	36.16%
1 TO 5 HRS	121,616	72.96%
5 TO 10 HRS	34,626	83.44%
10 TO 15 HRS	12,212	87.13%
15 TO 20 HRS	6,694	89.16%
20 TO 24 HRS	4,487	90.52%
>=1 AND <=2	14,661	94.95%
>=2 AND <=3	4,692	96.37%
>=3 AND <=4	4,289	97.67%
>=4 AND <=5	2,358	98.38%
>=5 AND <=6	1,512	98.84%
>=6 AND <=7	3,038	99.76%
> 7	789	100.00%
Total	330,491	

Table 6 / Figure 2 – 2011 Outage Event Duration Graph



The excludable portion of this storm event consisted of 1,137 sustained outages. Approximately 1,694 PG&E employees from the divisions noted in Table 4 responded to this event. In addition, approximately 120 crews (vegetation and contract crews) were utilized to supplement the existing resources.

Of the total customers that experienced outages during the excludable portion of this eleven-day event, 90.5% were restored within 24 hours. Approximately 5.0% of the customers impacted by the storm were without service after 48 hours. This was primarily due to the severity and duration of the storm activity. Restoration to the remaining customers was delayed due to the heavy damage to equipment (poles and conductor) as a result of trees falling on and through the lines. This was prevalent in the northern and central coast areas. The tables below provide further outage duration detail as well as the damage caused (in term of equipment).

Table 7 – 2011 Outage Duration Details

Major Event Days: March 17-27, 2011			Major Event Days: March 17-27, 2011			Major Event Days: March 17-27, 2011		
Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %
0 TO 1 HRS	119,517	36.16%	98 TO 99 HRS	0	97.71%	178 TO 179 HRS	0	99.83%
1 TO 5 HRS	121,616	72.96%	99 TO 100 HRS	0	97.71%	179 TO 180 HRS	19	99.84%
5 TO 10 HRS	34,626	83.44%	100 TO 101 HRS	37	97.72%	180 TO 181 HRS	2	99.84%
10 TO 15 HRS	12,212	87.13%	101 TO 102 HRS	112	97.75%	181 TO 182 HRS	0	99.84%
15 TO 20 HRS	6,694	89.16%	102 TO 103 HRS	68	97.77%	182 TO 183 HRS	9	99.84%
20 TO 24 HRS	4,487	90.52%	103 TO 104 HRS	168	97.82%	183 TO 184 HRS	18	99.84%
24 TO 25 HRS	416	90.64%	104 TO 105 HRS	2	97.82%	184 TO 185 HRS	0	99.84%
25 TO 26 HRS	583	90.82%	105 TO 106 HRS	248	97.90%	185 TO 186 HRS	426	99.97%
26 TO 27 HRS	2,438	91.56%	106 TO 107 HRS	41	97.91%	186 TO 187 HRS	46	99.99%
27 TO 28 HRS	404	91.68%	107 TO 108 HRS	126	97.95%	187 TO 188 HRS	0	99.99%
28 TO 29 HRS	151	91.73%	108 TO 109 HRS	390	98.07%	188 TO 189 HRS	0	99.99%
29 TO 30 HRS	959	92.02%	109 TO 110 HRS	301	98.16%	189 TO 190 HRS	5	99.99%
30 TO 31 HRS	770	92.25%	110 TO 111 HRS	107	98.19%	190 TO 191 HRS	0	99.99%
31 TO 32 HRS	96	92.28%	111 TO 112 HRS	42	98.20%	191 TO 192 HRS	0	99.99%
32 TO 33 HRS	47	92.29%	112 TO 113 HRS	64	98.22%	192 TO 193 HRS	0	99.99%
33 TO 34 HRS	1,171	92.65%	113 TO 114 HRS	50	98.24%	193 TO 194 HRS	0	99.99%
34 TO 35 HRS	504	92.80%	114 TO 115 HRS	0	98.24%	194 TO 195 HRS	0	99.99%
35 TO 36 HRS	755	93.03%	115 TO 116 HRS	46	98.25%	195 TO 196 HRS	0	99.99%
36 TO 37 HRS	62	93.05%	116 TO 117 HRS	411	98.38%	196 TO 197 HRS	0	99.99%
37 TO 38 HRS	1,372	93.46%	117 TO 118 HRS	25	98.38%	197 TO 198 HRS	0	99.99%
38 TO 39 HRS	463	93.60%	118 TO 119 HRS	0	98.38%	198 TO 199 HRS	24	100.00%
39 TO 40 HRS	118	93.64%	119 TO 120 HRS	0	98.38%	199 TO 200 HRS	0	100.00%
40 TO 41 HRS	143	93.68%	120 TO 121 HRS	137	98.43%	200 TO 201 HRS	0	100.00%
41 TO 42 HRS	516	93.84%	121 TO 122 HRS	37	98.44%	201 TO 202 HRS	0	100.00%
42 TO 43 HRS	781	94.07%	122 TO 123 HRS	21	98.44%	202 TO 203 HRS	0	100.00%
43 TO 44 HRS	547	94.24%	123 TO 124 HRS	0	98.44%	203 TO 204 HRS	0	100.00%
44 TO 45 HRS	408	94.36%	124 TO 125 HRS	102	98.47%	204 TO 205 HRS	0	100.00%
45 TO 46 HRS	492	94.51%	125 TO 126 HRS	68	98.49%	205 TO 206 HRS	0	100.00%
46 TO 47 HRS	919	94.79%	126 TO 127 HRS	0	98.49%	206 TO 207 HRS	0	100.00%
47 TO 48 HRS	546	94.95%	127 TO 128 HRS	45	98.51%	207 TO 208 HRS	0	100.00%
48 TO 49 HRS	68	94.97%	128 TO 129 HRS	58	98.53%	208 TO 209 HRS	0	100.00%
49 TO 50 HRS	176	95.03%	129 TO 130 HRS	1	98.53%	209 TO 210 HRS	0	100.00%
50 TO 51 HRS	351	95.13%	130 TO 131 HRS	17	98.53%	210 TO 211 HRS	2	100.00%
51 TO 52 HRS	91	95.16%	131 TO 132 HRS	0	98.53%	211 TO 212 HRS	0	100.00%
52 TO 53 HRS	48	95.18%	132 TO 133 HRS	125	98.57%	212 TO 213 HRS	0	100.00%
53 TO 54 HRS	197	95.23%	133 TO 134 HRS	55	98.59%	213 TO 214 HRS	0	100.00%
54 TO 55 HRS	227	95.30%	134 TO 135 HRS	79	98.61%	214 TO 215 HRS	0	100.00%
55 TO 56 HRS	548	95.47%	135 TO 136 HRS	65	98.63%	215 TO 216 HRS	0	100.00%
56 TO 57 HRS	49	95.48%	136 TO 137 HRS	51	98.65%	216 TO 217 HRS	0	100.00%
57 TO 58 HRS	285	95.57%	137 TO 138 HRS	36	98.66%	217 TO 218 HRS	0	100.00%
58 TO 59 HRS	259	95.65%	138 TO 139 HRS	323	98.75%	218 TO 219 HRS	0	100.00%
59 TO 60 HRS	116	95.68%	139 TO 140 HRS	52	98.77%	219 TO 220 HRS	0	100.00%
60 TO 61 HRS	462	95.82%	140 TO 141 HRS	54	98.79%	220 TO 221 HRS	0	100.00%
61 TO 62 HRS	208	95.89%	141 TO 142 HRS	26	98.79%	221 TO 222 HRS	0	100.00%
62 TO 63 HRS	260	95.97%	142 TO 143 HRS	149	98.84%	222 TO 223 HRS	0	100.00%
63 TO 64 HRS	408	96.09%	143 TO 144 HRS	11	98.84%	223 TO 224 HRS	0	100.00%
64 TO 65 HRS	141	96.13%	144 TO 145 HRS	0	98.84%	224 TO 225 HRS	0	100.00%
65 TO 66 HRS	259	96.21%	145 TO 146 HRS	116	98.88%	225 TO 226 HRS	0	100.00%
66 TO 67 HRS	185	96.27%	146 TO 147 HRS	0	98.88%	226 TO 227 HRS	0	100.00%
67 TO 68 HRS	109	96.30%	147 TO 148 HRS	69	98.90%	227 TO 228 HRS	0	100.00%
68 TO 69 HRS	207	96.36%	148 TO 149 HRS	346	99.00%	228 TO 229 HRS	0	100.00%
69 TO 70 HRS	19	96.37%	149 TO 150 HRS	71	99.02%	229 TO 230 HRS	0	100.00%
70 TO 71 HRS	20	96.37%	150 TO 151 HRS	166	99.07%	230 TO 231 HRS	0	100.00%
71 TO 72 HRS	0	96.37%	151 TO 152 HRS	0	99.07%	231 TO 232 HRS	0	100.00%
72 TO 73 HRS	146	96.42%	152 TO 153 HRS	59	99.09%	232 TO 233 HRS	0	100.00%
73 TO 74 HRS	136	96.46%	153 TO 154 HRS	230	99.16%	233 TO 234 HRS	0	100.00%
74 TO 75 HRS	0	96.46%	154 TO 155 HRS	206	99.22%	234 TO 235 HRS	0	100.00%
75 TO 76 HRS	6	96.46%	155 TO 156 HRS	199	99.28%	235 TO 236 HRS	0	100.00%
76 TO 77 HRS	1,200	96.82%	156 TO 157 HRS	33	99.29%	236 TO 237 HRS	0	100.00%
77 TO 78 HRS	322	96.92%	157 TO 158 HRS	44	99.31%	237 TO 238 HRS	0	100.00%
78 TO 79 HRS	72	96.94%	158 TO 159 HRS	209	99.37%	238 TO 239 HRS	0	100.00%
79 TO 80 HRS	115	96.98%	159 TO 160 HRS	536	99.53%	239 TO 240 HRS	0	100.00%
80 TO 81 HRS	0	96.98%	160 TO 161 HRS	51	99.55%	240 TO 241 HRS	0	100.00%
81 TO 82 HRS	129	97.02%	161 TO 162 HRS	234	99.62%	241 TO 242 HRS	0	100.00%
82 TO 83 HRS	559	97.19%	162 TO 163 HRS	78	99.64%	242 TO 243 HRS	0	100.00%
83 TO 84 HRS	21	97.19%	163 TO 164 HRS	91	99.67%	243 TO 244 HRS	6	100.00%
84 TO 85 HRS	96	97.22%	164 TO 165 HRS	98	99.70%	244 TO 245 HRS	0	100.00%
85 TO 86 HRS	102	97.25%	165 TO 166 HRS	202	99.76%	245 TO 246 HRS	0	100.00%
86 TO 87 HRS	43	97.26%	166 TO 167 HRS	0	99.76%	246 TO 247 HRS	0	100.00%
87 TO 88 HRS	45	97.28%	167 TO 168 HRS	0	99.76%	247 TO 248 HRS	0	100.00%
88 TO 89 HRS	112	97.31%	168 TO 169 HRS	132	99.80%	248 TO 249 HRS	0	100.00%
89 TO 90 HRS	282	97.40%	169 TO 170 HRS	7	99.80%	249 TO 250 HRS	0	100.00%
90 TO 91 HRS	370	97.51%	170 TO 171 HRS	83	99.83%	250 TO 251 HRS	0	100.00%
91 TO 92 HRS	0	97.51%	171 TO 172 HRS	0	99.83%	251 TO 252 HRS	0	100.00%
92 TO 93 HRS	379	97.62%	172 TO 173 HRS	0	99.83%	252 TO 253 HRS	0	100.00%
93 TO 94 HRS	125	97.66%	173 TO 174 HRS	0	99.83%	253 TO 254 HRS	0	100.00%
94 TO 95 HRS	15	97.67%	174 TO 175 HRS	0	99.83%	254 TO 255 HRS	0	100.00%
95 TO 96 HRS	14	97.67%	175 TO 176 HRS	0	99.83%	255 TO 256 HRS	0	100.00%
96 TO 97 HRS	0	97.67%	176 TO 177 HRS	0	99.83%	256 TO 257 HRS	7	100.00%
97 TO 98 HRS	120	97.71%	177 TO 178 HRS	3	99.83%	Total:	326,828	

Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

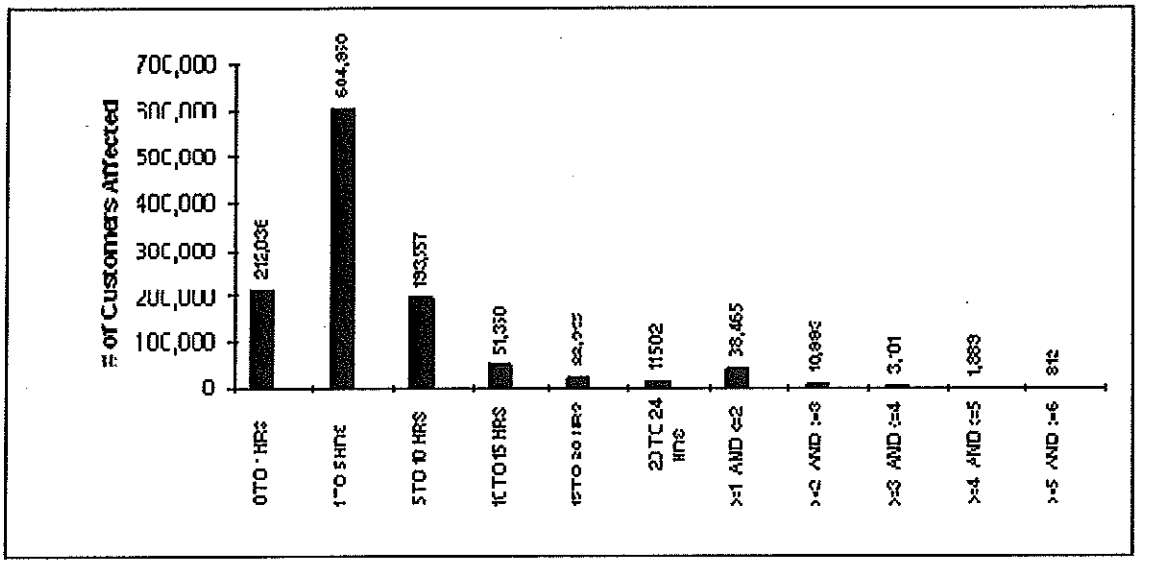
- January 18-24, 2010.

Table 5 below indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%. NOTE: The number of customers affected shown in the histogram below shows 1,153,304 customers, which is 1.4% lower than the 1,169,513 value recorded in PG&E's OUTAGE database.

Table 5 / Figure 1 – 2010 Outage Event Duration Summary

01/18/2010 - 01/24/2010		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	212,036	18.39%
1 TO 5 HRS	604,950	70.84%
5 TO 10 HRS	193,557	87.62%
10 TO 15 HRS	51,350	92.07%
15 TO 20 HRS	22,995	94.07%
20 TO 24 HRS	11,502	95.07%
>=1 AND <=2	38,465	98.40%
>=2 AND <=3	10,993	99.35%
>=3 AND <=4	3,101	99.62%
>=4 AND <=5	1,889	99.79%
>=5 AND <=6	812	99.86%
>=6 AND <=7	245	99.88%
> 7	1,409	100.00%
Total	1,153,304	

Table 5 / Figure 2 – 2010 Outage Event Duration Graph



This storm resulted in 3,147 sustained outages. Approximately 3,830 PG&E employees responded. In addition, approximately 1,360 individuals (vegetation personnel and contract crews) were utilized to supplement the existing resources.

Of the total customers that experienced outages during this seven-day Excludable Major Event, over 95% were restored within 24 hours. Approximately 1.6% of the customers impacted by the storm were without service after 48 hours. This was primarily due to the severity and duration of the storm activity. Restoration to the remaining customers was delayed due to the heavy damage to equipment (poles and conductor) as a result of trees falling on and through the

lines. This was prevalent in the northern and central coast areas. The tables below provide further outage duration detail as well as the damage caused (in term of equipment). .

Table 6 – 2010 Outage Duration Details

	Major Event Days: 1/18/2010 - 1/24/2010			Major Event Days: 1/18/2010 - 1/24/2010			Major Event Days: 1/18/2010 - 1/24/2010	
Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %	Outage Duration	Customers Restored	Cummulative %
0 TO 1 HRS	212,036	18.39%	88 TO 89 HRS	76	99.55%	158 TO 159 HRS	0	99.86%
1 TO 5 HRS	604,950	70.84%	89 TO 90 HRS	143	99.57%	159 TO 160 HRS	0	99.86%
5 TO 10 HRS	193,557	87.62%	90 TO 91 HRS	159	99.58%	160 TO 161 HRS	0	99.86%
10 TO 15 HRS	51,350	92.07%	91 TO 92 HRS	33	99.58%	161 TO 162 HRS	63	99.87%
15 TO 20 HRS	22,995	94.07%	92 TO 93 HRS	0	99.58%	162 TO 163 HRS	0	99.87%
20 TO 24 HRS	11,502	95.07%	93 TO 94 HRS	81	99.59%	163 TO 164 HRS	26	99.87%
24 TO 25 HRS	2,942	95.32%	94 TO 95 HRS	131	99.60%	164 TO 165 HRS	0	99.87%
25 TO 26 HRS	1,705	95.47%	95 TO 96 HRS	242	99.62%	165 TO 166 HRS	61	99.87%
26 TO 27 HRS	3,935	95.81%	96 TO 97 HRS	558	99.67%	166 TO 167 HRS	25	99.88%
27 TO 28 HRS	3,071	96.08%	97 TO 98 HRS	28	99.67%	167 TO 168 HRS	14	99.88%
28 TO 29 HRS	3,139	96.35%	98 TO 99 HRS	10	99.67%	168 TO 169 HRS	145	99.89%
29 TO 30 HRS	3,508	96.65%	99 TO 100 HRS	39	99.68%	169 TO 170 HRS	0	99.89%
30 TO 31 HRS	1,345	96.77%	100 TO 101 HRS	22	99.68%	170 TO 171 HRS	7	99.89%
31 TO 32 HRS	1,630	96.91%	101 TO 102 HRS	301	99.71%	171 TO 172 HRS	423	99.93%
32 TO 33 HRS	1,818	97.07%	102 TO 103 HRS	194	99.72%	172 TO 173 HRS	0	99.93%
33 TO 34 HRS	2,557	97.29%	103 TO 104 HRS	110	99.73%	173 TO 174 HRS	0	99.93%
34 TO 35 HRS	877	97.37%	104 TO 105 HRS	10	99.73%	174 TO 175 HRS	26	99.93%
35 TO 36 HRS	1,031	97.45%	105 TO 106 HRS	0	99.73%	175 TO 176 HRS	0	99.93%
36 TO 37 HRS	1,430	97.58%	106 TO 107 HRS	0	99.73%	176 TO 177 HRS	0	99.93%
37 TO 38 HRS	1,119	97.68%	107 TO 108 HRS	96	99.74%	177 TO 178 HRS	0	99.93%
38 TO 39 HRS	773	97.74%	108 TO 109 HRS	4	99.74%	178 TO 179 HRS	2	99.93%
39 TO 40 HRS	1,221	97.85%	109 TO 110 HRS	108	99.75%	179 TO 180 HRS	0	99.93%
40 TO 41 HRS	653	97.91%	110 TO 111 HRS	0	99.75%	180 TO 181 HRS	0	99.93%
41 TO 42 HRS	552	97.95%	111 TO 112 HRS	0	99.75%	181 TO 182 HRS	0	99.93%
42 TO 43 HRS	1,837	98.11%	112 TO 113 HRS	0	99.75%	182 TO 183 HRS	0	99.93%
43 TO 44 HRS	902	98.19%	113 TO 114 HRS	8	99.75%	183 TO 184 HRS	0	99.93%
44 TO 45 HRS	243	98.21%	114 TO 115 HRS	230	99.77%	184 TO 185 HRS	0	99.93%
45 TO 46 HRS	309	98.24%	115 TO 116 HRS	145	99.78%	185 TO 186 HRS	0	99.93%
46 TO 47 HRS	1,181	98.34%	116 TO 117 HRS	0	99.78%	186 TO 187 HRS	0	99.93%
47 TO 48 HRS	687	98.40%	117 TO 118 HRS	12	99.78%	187 TO 188 HRS	0	99.93%
48 TO 49 HRS	358	98.43%	118 TO 119 HRS	8	99.79%	188 TO 189 HRS	0	99.93%
49 TO 50 HRS	355	98.46%	119 TO 120 HRS	6	99.79%	189 TO 190 HRS	0	99.93%
50 TO 51 HRS	839	98.53%	120 TO 121 HRS	16	99.79%	190 TO 191 HRS	0	99.93%
51 TO 52 HRS	675	98.59%	121 TO 122 HRS	11	99.79%	191 TO 192 HRS	0	99.93%
52 TO 53 HRS	293	98.62%	122 TO 123 HRS	156	99.80%	192 TO 193 HRS	0	99.93%
53 TO 54 HRS	198	98.64%	123 TO 124 HRS	1	99.80%	193 TO 194 HRS	0	99.93%
54 TO 55 HRS	1,481	98.76%	124 TO 125 HRS	8	99.80%	194 TO 195 HRS	0	99.93%
55 TO 56 HRS	1,226	98.87%	125 TO 126 HRS	84	99.81%	195 TO 196 HRS	0	99.93%
56 TO 57 HRS	157	98.88%	126 TO 127 HRS	0	99.81%	196 TO 197 HRS	0	99.93%
57 TO 58 HRS	674	98.94%	127 TO 128 HRS	58	99.82%	197 TO 198 HRS	0	99.93%
58 TO 59 HRS	956	99.03%	128 TO 129 HRS	34	99.82%	198 TO 199 HRS	7	99.93%
59 TO 60 HRS	273	99.05%	129 TO 130 HRS	7	99.82%	199 TO 200 HRS	0	99.93%
60 TO 61 HRS	839	99.12%	130 TO 131 HRS	0	99.82%	200 TO 201 HRS	0	99.93%
61 TO 62 HRS	158	99.14%	131 TO 132 HRS	3	99.82%	201 TO 202 HRS	3	99.93%
62 TO 63 HRS	655	99.19%	132 TO 133 HRS	0	99.82%	202 TO 203 HRS	115	99.94%
63 TO 64 HRS	459	99.23%	133 TO 134 HRS	29	99.82%	203 TO 204 HRS	0	99.94%
64 TO 65 HRS	273	99.26%	134 TO 135 HRS	0	99.82%	204 TO 205 HRS	0	99.94%
65 TO 66 HRS	240	99.28%	135 TO 136 HRS	98	99.83%	205 TO 206 HRS	0	99.94%
66 TO 67 HRS	325	99.31%	136 TO 137 HRS	19	99.83%	206 TO 207 HRS	0	99.94%
67 TO 68 HRS	68	99.31%	137 TO 138 HRS	16	99.83%	207 TO 208 HRS	321	99.97%
68 TO 69 HRS	51	99.32%	138 TO 139 HRS	136	99.84%	208 TO 209 HRS	0	99.97%
69 TO 70 HRS	126	99.33%	139 TO 140 HRS	0	99.84%	209 TO 210 HRS	166	99.98%
70 TO 71 HRS	57	99.33%	140 TO 141 HRS	36	99.85%	210 TO 269 HRS	0	99.98%
71 TO 72 HRS	257	99.35%	141 TO 142 HRS	8	99.85%	269 TO 270 HRS	0	99.98%
72 TO 73 HRS	46	99.36%	142 TO 143 HRS	0	99.85%	270 TO 271 HRS	0	99.98%
73 TO 74 HRS	218	99.38%	143 TO 144 HRS	92	99.86%	271 TO 272 HRS	53	99.99%
74 TO 75 HRS	17	99.38%	144 TO 145 HRS	8	99.86%	272 TO 273 HRS	0	99.99%
75 TO 76 HRS	22	99.38%	145 TO 146 HRS	13	99.86%	273 TO 274 HRS	0	99.99%
76 TO 77 HRS	15	99.38%	146 TO 147 HRS	35	99.86%	274 TO 275 HRS	0	99.99%
77 TO 78 HRS	46	99.39%	147 TO 148 HRS	0	99.86%	275 TO 276 HRS	0	99.99%
78 TO 79 HRS	74	99.39%	148 TO 149 HRS	0	99.86%	276 TO 277 HRS	0	99.99%
79 TO 80 HRS	213	99.41%	149 TO 150 HRS	0	99.86%	277 TO 278 HRS	0	99.99%
80 TO 81 HRS	86	99.42%	150 TO 151 HRS	0	99.86%	278 TO 279 HRS	0	99.99%
81 TO 82 HRS	169	99.43%	151 TO 152 HRS	0	99.86%	279 TO 280 HRS	0	99.99%
82 TO 83 HRS	123	99.44%	152 TO 153 HRS	0	99.86%	280 TO 281 HRS	0	99.99%
83 TO 84 HRS	0	99.44%	153 TO 154 HRS	0	99.86%	281 TO 282 HRS	2	99.99%
84 TO 85 HRS	52	99.45%	154 TO 155 HRS	0	99.86%	282 TO 296 HRS	0	99.99%
85 TO 86 HRS	294	99.47%	155 TO 156 HRS	0	99.86%	296 TO 297 HRS	0	99.99%
86 TO 87 HRS	102	99.48%	156 TO 157 HRS	0	99.86%	297 TO 298 HRS	0	99.99%
87 TO 88 HRS	759	99.55%	157 TO 158 HRS	0	99.86%	298 TO 299 HRS	125	100.00%
						299 TO 300 HRS	0	100.00%
						300 TO 495 HRS	0	100.00%
						495 TO 496 HRS	0	100.00%
						496 TO 497 HRS	14	100.00%
						497 TO 498 HRS	0	100.00%
						498 TO 499 HRS	0	100.00%
						499 TO 500 HRS	0	100.00%
						> 500 HRS	0	100.00%
						Total	1,153,304	

Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

- October 13-14, 2009.

The Table 5 below indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%. NOTE: The number of customers affected shown in the histogram below shows 612,019 customers, which is 0.9% lower than the 617,589 value recorded in PG&E's OUTAGE database.

Table 5 / Figure 1 – 2009 Outage Event Duration Summary

10/13/2009 - 10/14/2009		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	81,010	13.2%
1 TO 5 HRS	315,520	64.8%
5 TO 10 HRS	99,270	81.0%
10 TO 15 HRS	38,176	87.2%
15 TO 20 HRS	25,305	91.4%
20 TO 24 HRS	16,424	94.1%
>=1 AND <=2	33,179	99.5%
>=2 AND <=3	2,876	100.0%
>=3 AND <=4	253	100.0%
>=4 AND <=5	0	100.0%
>=5 AND <=6	0	100.0%
>=6 *AND* <=7	0	100.0%
> 7	6	100.0%
Total	612,019	

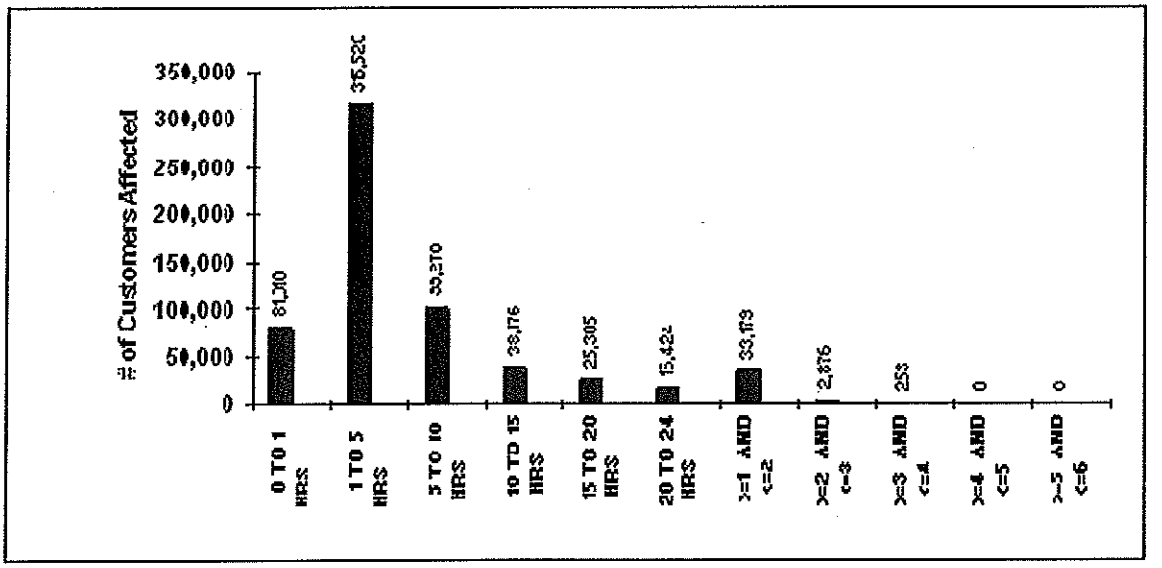


Table 6 – 2009 Outage Duration Details

Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %	Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %	Outage Duration	Major Event Days: 10/13/09 - 10/14/09 Customers Restored	Cumulative %
0 TO 1 HRS	81,010	13.24%	48 TO 49 HRS	211	99.52%	78 TO 79 HRS	0	100.00%
1 TO 5 HRS	315,520	64.79%	49 TO 50 HRS	336	99.58%	79 TO 80 HRS	9	100.00%
5 TO 10 HRS	99,270	81.01%	50 TO 51 HRS	599	99.68%	80 TO 81 HRS	2	100.00%
10 TO 15 HRS	38,176	87.25%	51 TO 52 HRS	133	99.70%	81 TO 82 HRS	0	100.00%
15 TO 20 HRS	25,305	91.38%	52 TO 53 HRS	175	99.73%	82 TO 83 HRS	0	100.00%
20 TO 24 HRS	16,424	94.07%	53 TO 54 HRS	20	99.73%	83 TO 84 HRS	0	100.00%
24 TO 25 HRS	3,429	94.63%	54 TO 55 HRS	114	99.75%	84 TO 85 HRS	0	100.00%
25 TO 26 HRS	2,199	94.99%	55 TO 56 HRS	312	99.80%	85 TO 86 HRS	0	100.00%
26 TO 27 HRS	2,235	95.35%	56 TO 57 HRS	181	99.83%	86 TO 87 HRS	0	100.00%
27 TO 28 HRS	1,857	95.65%	57 TO 58 HRS	149	99.85%	87 TO 88 HRS	0	100.00%
28 TO 29 HRS	3,381	96.21%	58 TO 59 HRS	156	99.88%	88 TO 89 HRS	0	100.00%
29 TO 30 HRS	804	96.34%	59 TO 60 HRS	37	99.88%	89 TO 90 HRS	0	100.00%
30 TO 31 HRS	1,289	96.55%	60 TO 61 HRS	2	99.88%	90 TO 91 HRS	0	100.00%
31 TO 32 HRS	2,790	97.00%	61 TO 62 HRS	19	99.89%	91 TO 92 HRS	0	100.00%
32 TO 33 HRS	2,449	97.41%	62 TO 63 HRS	29	99.89%	92 TO 93 HRS	0	100.00%
33 TO 34 HRS	1,244	97.61%	63 TO 64 HRS	8	99.89%	93 TO 94 HRS	0	100.00%
34 TO 35 HRS	592	97.71%	64 TO 65 HRS	72	99.90%	94 TO 95 HRS	0	100.00%
35 TO 36 HRS	1,558	97.96%	65 TO 66 HRS	76	99.92%	95 TO 96 HRS	0	100.00%
36 TO 37 HRS	544	98.05%	66 TO 67 HRS	5	99.92%	96 TO 97 HRS	0	100.00%
37 TO 38 HRS	4,407	98.77%	67 TO 68 HRS	0	99.92%	97 TO 98 HRS	0	100.00%
38 TO 39 HRS	98	98.78%	68 TO 69 HRS	13	99.92%	98 TO 99 HRS	0	100.00%
39 TO 40 HRS	418	98.85%	69 TO 70 HRS	57	99.93%	99 TO 100 HRS	0	100.00%
40 TO 41 HRS	487	98.93%	70 TO 71 HRS	139	99.95%	100 TO 101 HRS	0	100.00%
41 TO 42 HRS	958	99.09%	71 TO 72 HRS	33	99.96%	101 TO 102 HRS	0	100.00%
42 TO 43 HRS	109	99.11%	72 TO 73 HRS	29	99.96%	102 TO 103 HRS	0	100.00%
43 TO 44 HRS	364	99.17%	73 TO 74 HRS	71	99.97%	103 TO 104 HRS	0	100.00%
44 TO 45 HRS	661	99.27%	74 TO 75 HRS	15	99.98%	104 TO 105 HRS	0	100.00%
45 TO 46 HRS	120	99.29%	75 TO 76 HRS	2	99.98%	105 TO 106 HRS	0	100.00%
46 TO 47 HRS	640	99.40%	76 TO 77 HRS	70	99.99%	106 TO 107 HRS	0	100.00%
47 TO 48 HRS	546	99.49%	77 TO 78 HRS	55	100.00%	107 TO 108 HRS	0	100.00%
						108 TO 109 HRS	0	100.00%
						109 TO 110 HRS	0	100.00%
						> 110 HRS	0	100.00%
						Total	612,019	

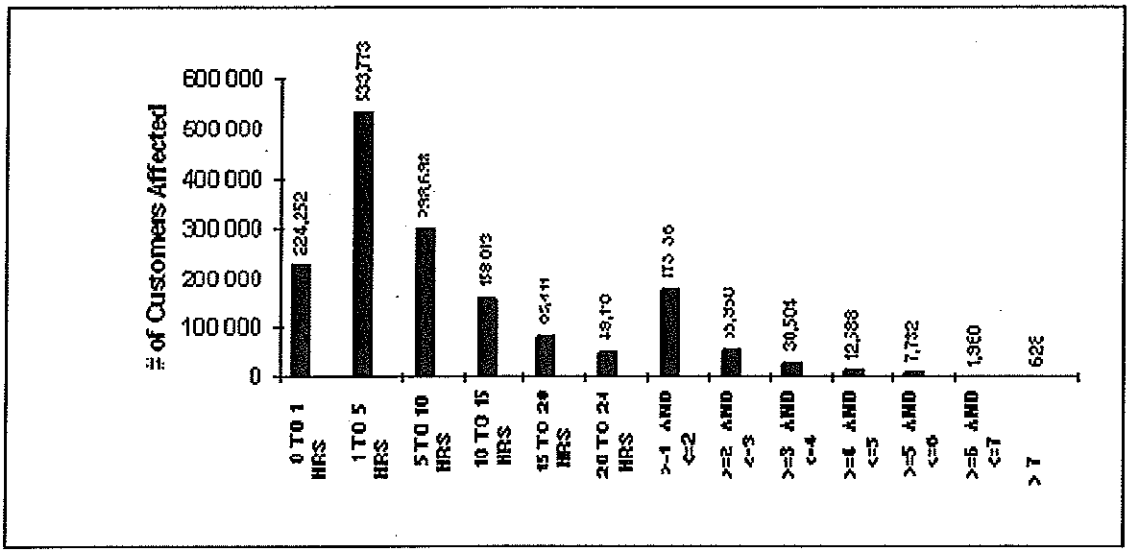
Of the ten largest events listed in Table 4, the following event met the CPUC definition of a major event.

- January 3-6, 2008.

The following table in this section indicates the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Table 5 / Figure 1 – 2008 Outage Event Duration Summary

01/03/08 - 01/06/08		
Outage Duration	**Customers Affected**	**Cumulative %**
0 TO 1 HRS	224,252	13.74%
1 TO 5 HRS	533,773	46.45%
5 TO 10 HRS	298,698	64.76%
10 TO 15 HRS	158,013	74.44%
15 TO 20 HRS	85,411	79.68%
20 TO 24 HRS	49,110	82.69%
>=1 AND <=2	173,136	93.30%
>=2 AND <=3	55,960	96.73%
>=3 AND <=4	30,504	98.60%
>=4 AND <=5	12,588	99.37%
>=5 AND <=6	7,732	99.84%
>=6 *AND* <=7	1,960	99.96%
> 7	628	100.00%
Total	1,631,765	



	Major Event Days: 1/3/08 - 1/6/08										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	224,236	13.95%	93 TO 94 HRS	646	100.04%	168 TO 169 HRS	65	101.47%	243 TO 244 HRS	0	101.50%
1 TO 5 HRS	533,675	47.15%	94 TO 95 HRS	295	100.06%	169 TO 170 HRS	27	101.47%	244 TO 245 HRS	0	101.50%
5 TO 10 HRS	298,692	65.73%	95 TO 96 HRS	304	100.08%	170 TO 171 HRS	13	101.47%	245 TO 246 HRS	0	101.50%
10 TO 15 HRS	158,001	75.56%	96 TO 97 HRS	247	100.09%	171 TO 172 HRS	0	101.47%	246 TO 247 HRS	0	101.50%
15 TO 20 HRS	85,407	80.88%	97 TO 98 HRS	636	100.13%	172 TO 173 HRS	13	101.47%	247 TO 248 HRS	0	101.50%
20 TO 24 HRS	49,085	83.93%	98 TO 99 HRS	1,253	100.21%	173 TO 174 HRS	2	101.47%	248 TO 249 HRS	0	101.50%
24 TO 25 HRS	14,291	84.82%	99 TO 100 HRS	656	100.25%	174 TO 175 HRS	8	101.47%	249 TO 250 HRS	0	101.50%
25 TO 26 HRS	7,281	85.27%	100 TO 101 HRS	1,052	100.32%	175 TO 176 HRS	6	101.47%	250 TO 251 HRS	0	101.50%
26 TO 27 HRS	16,482	86.30%	101 TO 102 HRS	1,546	100.41%	176 TO 177 HRS	38	101.47%	251 TO 252 HRS	0	101.50%
27 TO 28 HRS	11,957	87.04%	102 TO 103 HRS	676	100.45%	177 TO 178 HRS	0	101.47%	252 TO 253 HRS	0	101.50%
28 TO 29 HRS	16,705	88.08%	103 TO 104 HRS	820	100.51%	178 TO 179 HRS	0	101.47%	253 TO 254 HRS	0	101.50%
29 TO 30 HRS	7,478	88.54%	104 TO 105 HRS	691	100.55%	179 TO 180 HRS	0	101.47%	254 TO 255 HRS	0	101.50%
30 TO 31 HRS	14,566	89.45%	105 TO 106 HRS	501	100.58%	180 TO 181 HRS	0	101.47%	255 TO 256 HRS	0	101.50%
31 TO 32 HRS	8,893	90.00%	106 TO 107 HRS	594	100.62%	181 TO 182 HRS	32	101.48%	256 TO 257 HRS	0	101.50%
32 TO 33 HRS	6,934	90.44%	107 TO 108 HRS	820	100.67%	182 TO 183 HRS	0	101.48%	257 TO 258 HRS	0	101.50%
33 TO 34 HRS	5,724	90.79%	108 TO 109 HRS	230	100.68%	183 TO 184 HRS	0	101.48%	258 TO 259 HRS	0	101.50%
34 TO 35 HRS	6,208	91.18%	109 TO 110 HRS	231	100.70%	184 TO 185 HRS	0	101.48%	259 TO 260 HRS	46	101.50%
35 TO 36 HRS	7,496	91.64%	110 TO 111 HRS	204	100.71%	185 TO 186 HRS	4	101.48%	260 TO 261 HRS	0	101.50%
36 TO 37 HRS	8,359	92.16%	111 TO 112 HRS	356	100.73%	186 TO 187 HRS	2	101.48%	261 TO 262 HRS	0	101.50%
37 TO 38 HRS	8,046	92.66%	112 TO 113 HRS	423	100.76%	187 TO 188 HRS	0	101.48%	262 TO 263 HRS	38	101.50%
38 TO 39 HRS	6,875	93.09%	113 TO 114 HRS	148	100.77%	188 TO 189 HRS	0	101.48%	263 TO 264 HRS	0	101.50%
39 TO 40 HRS	3,971	93.34%	114 TO 115 HRS	117	100.77%	189 TO 190 HRS	0	101.48%	264 TO 265 HRS	0	101.50%
40 TO 41 HRS	2,213	93.48%	115 TO 116 HRS	107	100.78%	190 TO 191 HRS	0	101.48%	265 TO 266 HRS	0	101.50%
41 TO 42 HRS	4,531	93.76%	116 TO 117 HRS	544	100.81%	191 TO 192 HRS	135	101.48%	266 TO 267 HRS	0	101.50%
42 TO 43 HRS	4,518	94.04%	117 TO 118 HRS	61	100.82%	192 TO 193 HRS	0	101.48%	267 TO 268 HRS	0	101.50%
43 TO 44 HRS	3,409	94.25%	118 TO 119 HRS	105	100.83%	193 TO 194 HRS	0	101.48%	268 TO 269 HRS	0	101.50%
44 TO 45 HRS	729	94.30%	119 TO 120 HRS	570	100.86%	194 TO 195 HRS	12	101.48%	269 TO 270 HRS	0	101.50%
45 TO 46 HRS	833	94.35%	120 TO 121 HRS	614	100.90%	195 TO 196 HRS	26	101.49%	270 TO 271 HRS	0	101.50%
46 TO 47 HRS	3,037	94.54%	121 TO 122 HRS	277	100.92%	196 TO 197 HRS	21	101.49%	271 TO 272 HRS	0	101.50%
47 TO 48 HRS	2,579	94.70%	122 TO 123 HRS	335	100.94%	197 TO 198 HRS	0	101.49%	272 TO 273 HRS	0	101.50%
48 TO 49 HRS	2,952	94.88%	123 TO 124 HRS	142	100.95%	198 TO 199 HRS	26	101.49%	273 TO 274 HRS	0	101.50%
49 TO 50 HRS	1,297	94.96%	124 TO 125 HRS	592	100.98%	199 TO 200 HRS	1	101.49%	274 TO 275 HRS	0	101.50%
50 TO 51 HRS	1,575	95.06%	125 TO 126 HRS	518	101.01%	200 TO 201 HRS	0	101.49%	275 TO 276 HRS	0	101.50%
51 TO 52 HRS	3,236	95.26%	126 TO 127 HRS	503	101.05%	201 TO 202 HRS	27	101.49%	276 TO 277 HRS	0	101.50%
52 TO 53 HRS	5,199	95.59%	127 TO 128 HRS	341	101.07%	202 TO 203 HRS	0	101.49%	277 TO 278 HRS	0	101.50%
53 TO 54 HRS	3,310	95.79%	128 TO 129 HRS	545	101.10%	203 TO 204 HRS	0	101.49%	278 TO 279 HRS	0	101.50%
54 TO 55 HRS	5,085	96.11%	129 TO 130 HRS	186	101.11%	204 TO 205 HRS	4	101.49%	279 TO 280 HRS	0	101.50%
55 TO 56 HRS	4,535	96.39%	130 TO 131 HRS	264	101.13%	205 TO 206 HRS	0	101.49%	280 TO 281 HRS	0	101.50%
56 TO 57 HRS	2,805	96.56%	131 TO 132 HRS	551	101.16%	206 TO 207 HRS	0	101.49%	281 TO 282 HRS	0	101.50%
57 TO 58 HRS	1,906	96.68%	132 TO 133 HRS	42	101.17%	207 TO 208 HRS	0	101.49%	282 TO 283 HRS	0	101.50%
58 TO 59 HRS	4,303	96.95%	133 TO 134 HRS	527	101.20%	208 TO 209 HRS	0	101.49%	283 TO 284 HRS	0	101.50%
59 TO 60 HRS	2,836	97.13%	134 TO 135 HRS	130	101.21%	209 TO 210 HRS	0	101.49%	284 TO 285 HRS	0	101.50%
60 TO 61 HRS	808	97.18%	135 TO 136 HRS	433	101.23%	210 TO 211 HRS	0	101.49%	285 TO 286 HRS	0	101.50%
61 TO 62 HRS	1,356	97.26%	136 TO 137 HRS	281	101.25%	211 TO 212 HRS	0	101.49%	286 TO 287 HRS	0	101.50%
62 TO 63 HRS	2,156	97.40%	137 TO 138 HRS	282	101.27%	212 TO 213 HRS	0	101.49%	287 TO 288 HRS	0	101.50%
63 TO 64 HRS	1,445	97.49%	138 TO 139 HRS	427	101.30%	213 TO 214 HRS	0	101.49%	288 TO 289 HRS	0	101.50%
64 TO 65 HRS	1,487	97.58%	139 TO 140 HRS	3	101.30%	214 TO 215 HRS	33	101.49%	289 TO 290 HRS	8	101.50%
65 TO 66 HRS	1,223	97.65%	140 TO 141 HRS	114	101.30%	215 TO 216 HRS	0	101.49%	290 TO 291 HRS	0	101.50%
66 TO 67 HRS	3,131	97.85%	141 TO 142 HRS	105	101.31%	216 TO 217 HRS	0	101.49%	291 TO 292 HRS	0	101.50%
67 TO 68 HRS	741	97.90%	142 TO 143 HRS	51	101.31%	217 TO 218 HRS	0	101.49%	292 TO 293 HRS	0	101.50%
68 TO 69 HRS	1,066	97.96%	143 TO 144 HRS	455	101.34%	218 TO 219 HRS	0	101.49%	293 TO 294 HRS	0	101.50%
69 TO 70 HRS	1,431	98.05%	144 TO 145 HRS	117	101.35%	219 TO 220 HRS	0	101.49%	294 TO 295 HRS	0	101.50%
70 TO 71 HRS	621	98.09%	145 TO 146 HRS	20	101.35%	220 TO 221 HRS	0	101.49%	295 TO 296 HRS	0	101.50%
71 TO 72 HRS	1,452	98.18%	146 TO 147 HRS	127	101.36%	221 TO 222 HRS	0	101.49%	296 TO 297 HRS	0	101.50%
72 TO 73 HRS	1,002	98.24%	147 TO 148 HRS	107	101.36%	222 TO 223 HRS	0	101.49%	297 TO 298 HRS	0	101.50%
73 TO 74 HRS	866	98.30%	148 TO 149 HRS	123	101.37%	223 TO 224 HRS	0	101.49%	298 TO 299 HRS	0	101.50%
74 TO 75 HRS	2,047	98.42%	149 TO 150 HRS	371	101.39%	224 TO 225 HRS	0	101.49%	299 TO 300 HRS	0	101.50%
75 TO 76 HRS	2,303	98.57%	150 TO 151 HRS	527	101.43%	225 TO 226 HRS	0	101.49%	> 300 HRS	0	101.50%
76 TO 77 HRS	2,170	98.70%	151 TO 152 HRS	68	101.43%	226 TO 227 HRS	0	101.49%	Total	1,607,425	
77 TO 78 HRS	1,863	98.82%	152 TO 153 HRS	171	101.44%	227 TO 228 HRS	0	101.49%			
78 TO 79 HRS	2,916	99.00%	153 TO 154 HRS	53	101.45%	228 TO 229 HRS	0	101.49%			
79 TO 80 HRS	1,867	99.12%	154 TO 155 HRS	78	101.45%	229 TO 230 HRS	0	101.49%			
80 TO 81 HRS	1,198	99.19%	155 TO 156 HRS	31	101.45%	230 TO 231 HRS	0	101.49%			
81 TO 82 HRS	2,400	99.34%	156 TO 157 HRS	36	101.45%	231 TO 232 HRS	0	101.49%			
82 TO 83 HRS	1,610	99.44%	157 TO 158 HRS	3	101.45%	232 TO 233 HRS	0	101.49%			
83 TO 84 HRS	1,655	99.54%	158 TO 159 HRS	20	101.46%	233 TO 234 HRS	0	101.49%			
84 TO 85 HRS	766	99.59%	159 TO 160 HRS	40	101.46%	234 TO 235 HRS	0	101.49%			
85 TO 86 HRS	1,178	99.66%	160 TO 161 HRS	20	101.46%	235 TO 236 HRS	39	101.50%			
86 TO 87 HRS	2,437	99.81%	161 TO 162 HRS	0	101.46%	236 TO 237 HRS	2	101.50%			
87 TO 88 HRS	547	99.85%	162 TO 163 HRS	0	101.46%	237 TO 238 HRS	0	101.50%			
88 TO 89 HRS	920	99.91%	163 TO 164 HRS	7	101.46%	238 TO 239 HRS	0	101.50%			
89 TO 90 HRS	232	99.92%	164 TO 165 HRS	0	101.46%	239 TO 240 HRS	0	101.50%			
90 TO 91 HRS	563	99.96%	165 TO 166 HRS	9	101.46%	240 TO 241 HRS	0	101.50%			
91 TO 92 HRS	434	99.98%	166 TO 167 HRS	1	101.46%	241 TO 242 HRS	0	101.50%			
92 TO 93 HRS	284	100.00%	167 TO 168 HRS	31	101.46%	242 TO 243 HRS	0	101.50%			

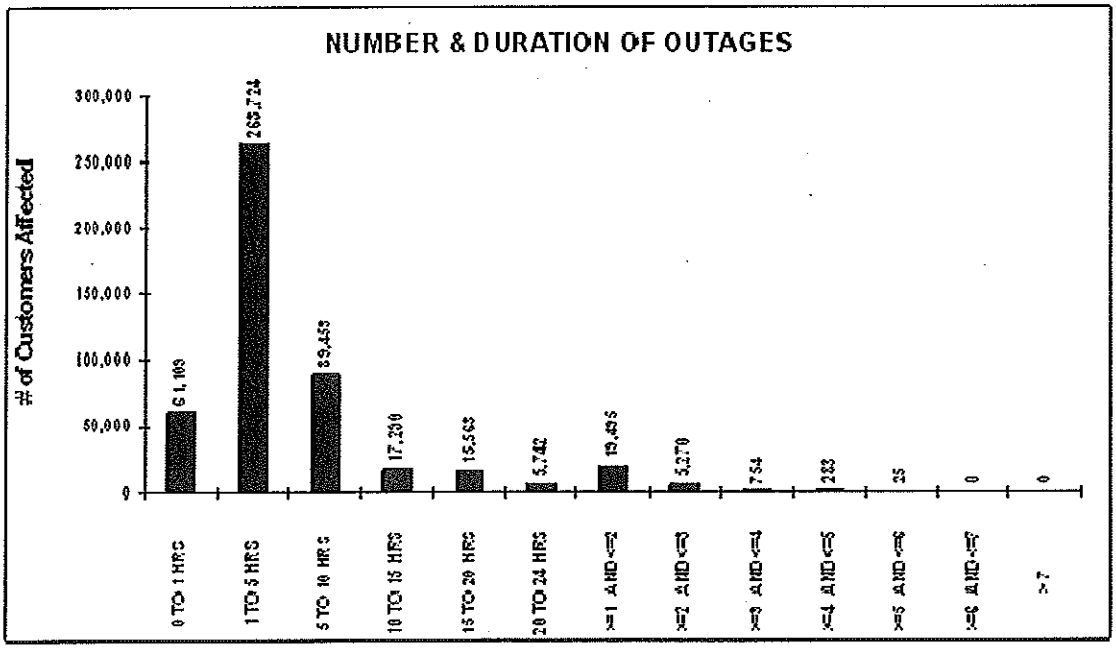
Of the ten largest events listed in Table 5 the following events met the CPUC definition of a major event:

- January 1-5, 2006
- February 26-28, 2006
- March 2-5, 2006
- March 9-14, 2006
- April 4-5, 2006
- July 21-27, 2006
- December 26-28, 2006

The following tables in this section indicate the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Table 6/ Figure 1 – January 1-5, 2006 Outage Event Duration Summary

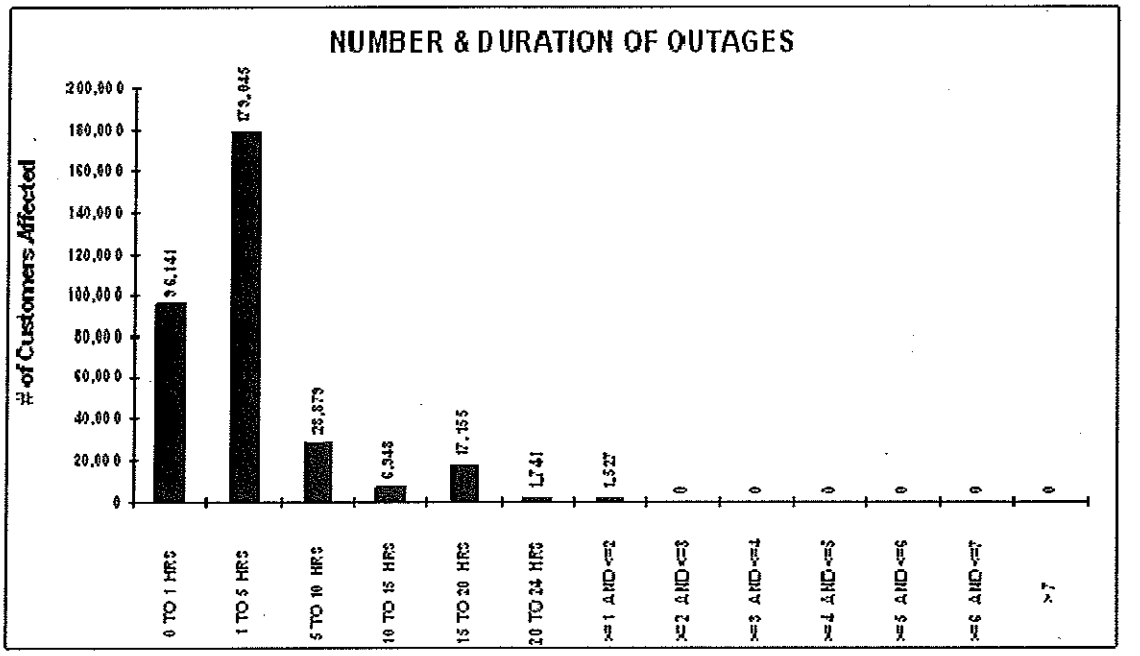
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	01/01/2006	Noted in Table 5	68,532
1 TO 5 HRS	"	"	274,930
5 TO 10 HRS	"	"	91,135
10 TO 15 HRS	"	"	18,499
15 TO 20 HRS	"	"	15,785
20 TO 24 HRS	"	"	5,743
>=1 AND <=2	"	"	20,135
>=2 AND <=3	"	"	5,321
>=3 AND <=4	"	"	754
>=4 AND <=5	"	"	283
>=5 AND <=6	"	"	25
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 1/1/06 - 1/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	68,487	13.67%	93 TO 94 HRS	0	99.94%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	274,890	68.53%	94 TO 95 HRS	0	99.94%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	91,126	86.72%	95 TO 96 HRS	0	99.94%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	18,499	90.41%	96 TO 97 HRS	150	99.97%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	15,785	93.56%	97 TO 98 HRS	0	99.97%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	5,743	94.71%	98 TO 99 HRS	0	99.97%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,341	94.98%	99 TO 100 HRS	0	99.97%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	2,567	95.49%	100 TO 101 HRS	14	99.97%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	1,432	95.78%	101 TO 102 HRS	66	99.98%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	2,716	96.32%	102 TO 103 HRS	0	99.98%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	1,780	96.67%	103 TO 104 HRS	0	99.98%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	951	96.86%	104 TO 105 HRS	18	99.99%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	1,051	97.07%	105 TO 106 HRS	12	99.99%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	796	97.23%	106 TO 107 HRS	0	99.99%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,053	97.44%	107 TO 108 HRS	6	99.99%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	800	97.60%	108 TO 109 HRS	0	99.99%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	362	97.67%	109 TO 110 HRS	0	99.99%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	1,716	98.02%	110 TO 111 HRS	14	99.99%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	143	98.04%	111 TO 112 HRS	0	99.99%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	190	98.08%	112 TO 113 HRS	0	99.99%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	908	98.26%	113 TO 114 HRS	0	99.99%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	207	98.31%	114 TO 115 HRS	3	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	42	98.31%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	111	98.34%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	65	98.35%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	205	98.39%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	368	98.46%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	88	98.48%	120 TO 121 HRS	5	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	442	98.57%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	800	98.73%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	645	98.86%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	891	99.04%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	314	99.10%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	509	99.20%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	70	99.21%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	475	99.31%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	279	99.36%	129 TO 130 HRS	20	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	57	99.38%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	261	99.43%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	924	99.61%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	330	99.68%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	15	99.68%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	165	99.71%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	48	99.72%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	50	99.73%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	202	99.77%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	99.77%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	68	99.79%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	99.79%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	99.79%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	99.79%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.79%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	99.79%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	5	99.79%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	94	99.81%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	9	99.81%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	4	99.81%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	7	99.81%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	62	99.82%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	501,034	
77 TO 78 HRS	17	99.83%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	90	99.84%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	4	99.85%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.85%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	33	99.85%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	301	99.91%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	2	99.91%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.91%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.91%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.91%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	19	99.92%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	1	99.92%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.92%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	101	99.94%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	10	99.94%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.94%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 7/ Figure 2 – February 26-28, 2006 Outage Event Duration Summary

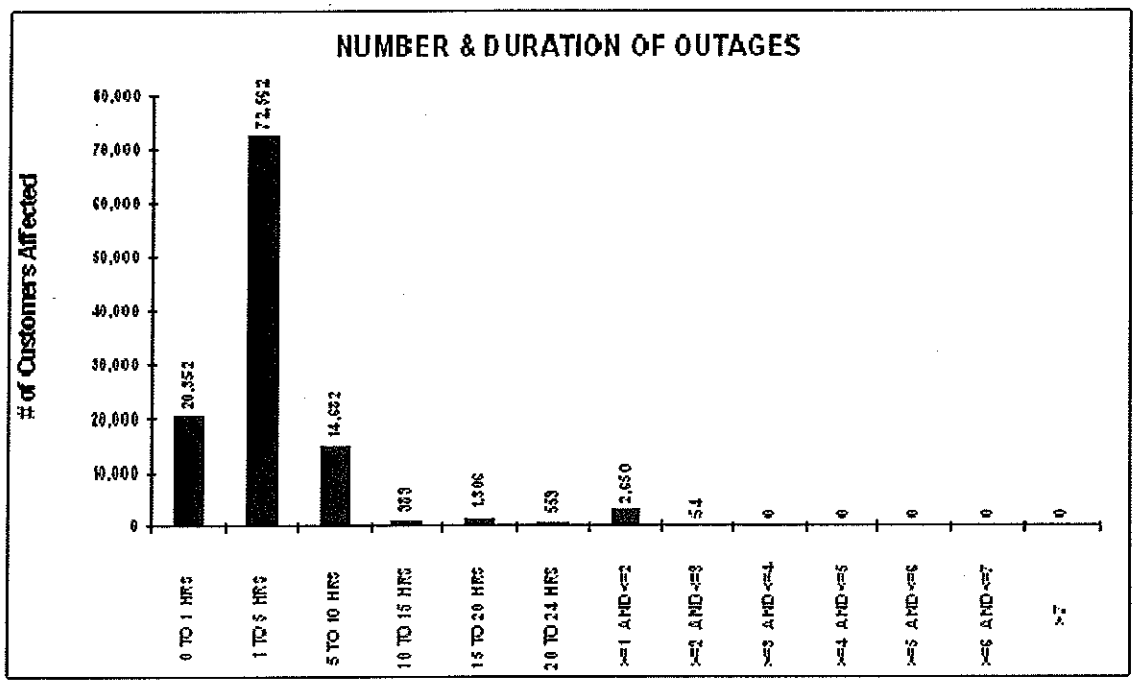
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	02/26/2006	Noted in Table 5	96,141
1 TO 5 HRS	"	"	179,045
5 TO 10 HRS	"	"	28,879
10 TO 15 HRS	"	"	6,948
15 TO 20 HRS	"	"	17,155
20 TO 24 HRS	"	"	1,741
>=1 AND <=2	"	"	1,527
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 2/26/06 - 2/28/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	96,136	29.01%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	178,998	83.03%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	28,877	91.74%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	6,948	93.84%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	17,154	99.01%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	1,741	99.54%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	526	99.70%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	337	99.80%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	191	99.86%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	3	99.86%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	0	99.86%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	1	99.86%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	160	99.91%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	60	99.92%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	16	99.93%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	5	99.93%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	82	99.96%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	99.96%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	99.96%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	12	99.96%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	9	99.96%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	99.96%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.96%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	99.96%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	32	99.97%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	99.97%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	93	100.00%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	100.00%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	100.00%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	100.00%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	331,381	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 8/ Figure 3 – March 2-5, 2006 Outage Event Duration Summary

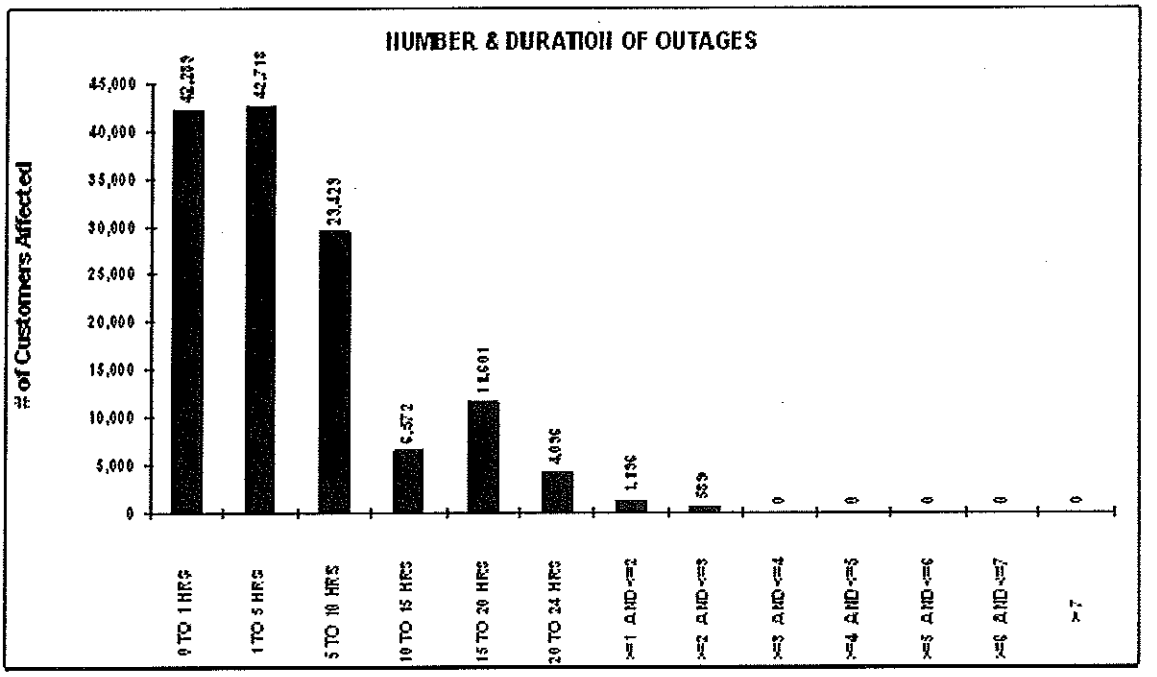
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/02/2006	Noted in Table 5	20,352
1 TO 5 HRS	"	"	72,562
5 TO 10 HRS	"	"	14,682
10 TO 15 HRS	"	"	989
15 TO 20 HRS	"	"	1,306
20 TO 24 HRS	"	"	559
>=1 AND <=2	"	"	2,650
>=2 AND <=3	"	"	54
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 *AND* <=7	"	"	0
> 7	"	"	0



	Major Event Days: 3/2/06 - 3/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	20,352	17.99%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	72,558	82.11%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	14,682	95.09%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	989	95.96%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	1,306	97.12%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	559	97.61%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	0	97.61%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	362	97.93%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	42	97.97%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	158	98.11%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	504	98.55%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	12	98.56%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	19	98.58%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	41	98.62%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	19	98.63%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	34	98.66%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	77	98.73%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	98.73%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	79	98.80%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	17	98.82%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	854	99.57%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	203	99.75%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.75%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	37	99.78%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	1	99.78%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	23	99.80%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	124	99.91%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.91%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	99.91%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	44	99.95%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	1	99.95%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.95%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.95%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	25	99.98%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	9	99.98%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	99.98%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	99.98%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.98%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	99.98%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	99.98%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	99.98%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	99.98%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	1	99.98%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	99.98%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	99.98%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	1	99.98%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	14	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	3	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	113,150	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 9/ Figure 4 – March 9-14, 2006 Outage Event Duration Summary

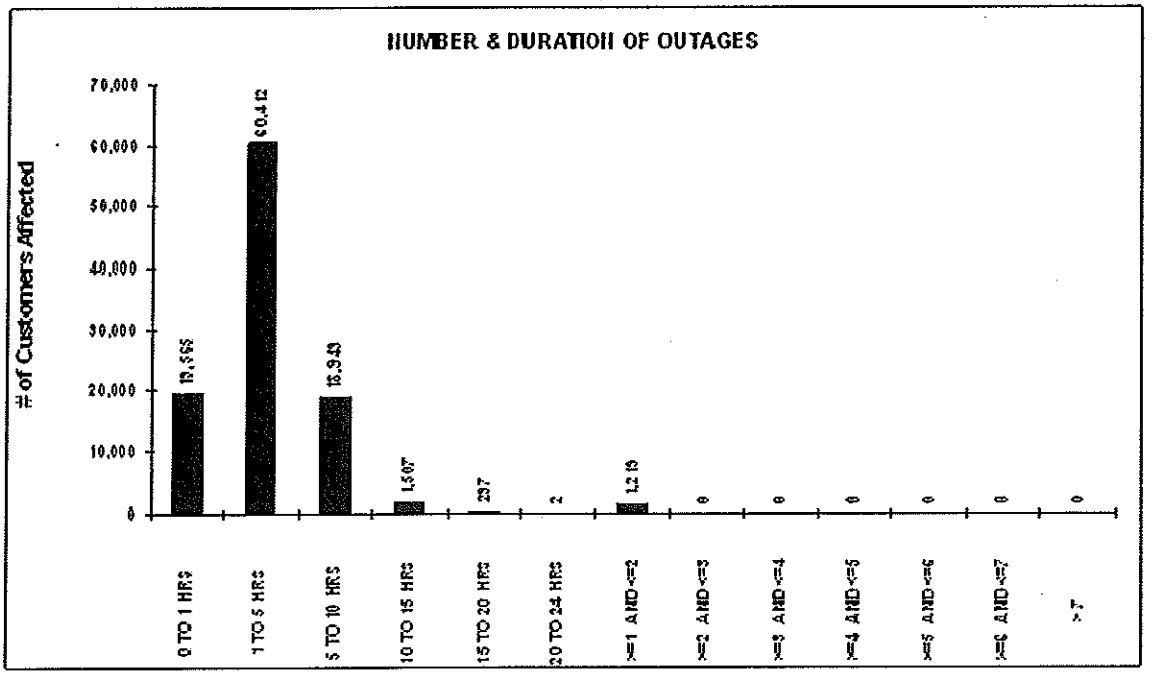
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/09/2006	Noted in Table 5	42,289
1 TO 5 HRS	"	"	42,718
5 TO 10 HRS	"	"	29,429
10 TO 15 HRS	"	"	6,572
15 TO 20 HRS	"	"	11,601
20 TO 24 HRS	"	"	4,096
>=1 AND <=2	"	"	1,196
>=2 AND <=3	"	"	589
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 *AND* <=7	"	"	0
> 7	"	"	0



	Major Event Days: 3/9/06 - 3/14/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	42,269	30.54%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	42,718	61.38%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	29,429	82.63%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	6,572	87.38%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	11,601	95.75%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	4,096	98.71%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	49	98.75%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	167	98.87%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	147	98.97%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	70	99.02%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	52	99.06%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	25	99.08%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	7	99.08%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	64	99.13%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	46	99.16%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	99.16%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	99.16%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	39	99.19%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	187	99.33%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	99.33%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	29	99.35%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	99.35%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.35%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	2	99.35%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	99.35%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	99.35%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	185	99.48%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.48%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	9	99.49%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	118	99.57%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	99.57%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.57%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.57%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	31	99.60%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	99.60%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	99.60%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	99.60%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.60%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	553	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	5	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	138,490	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 10/ Figure 5 – April 4-5, 2006 Outage Event Duration Summary

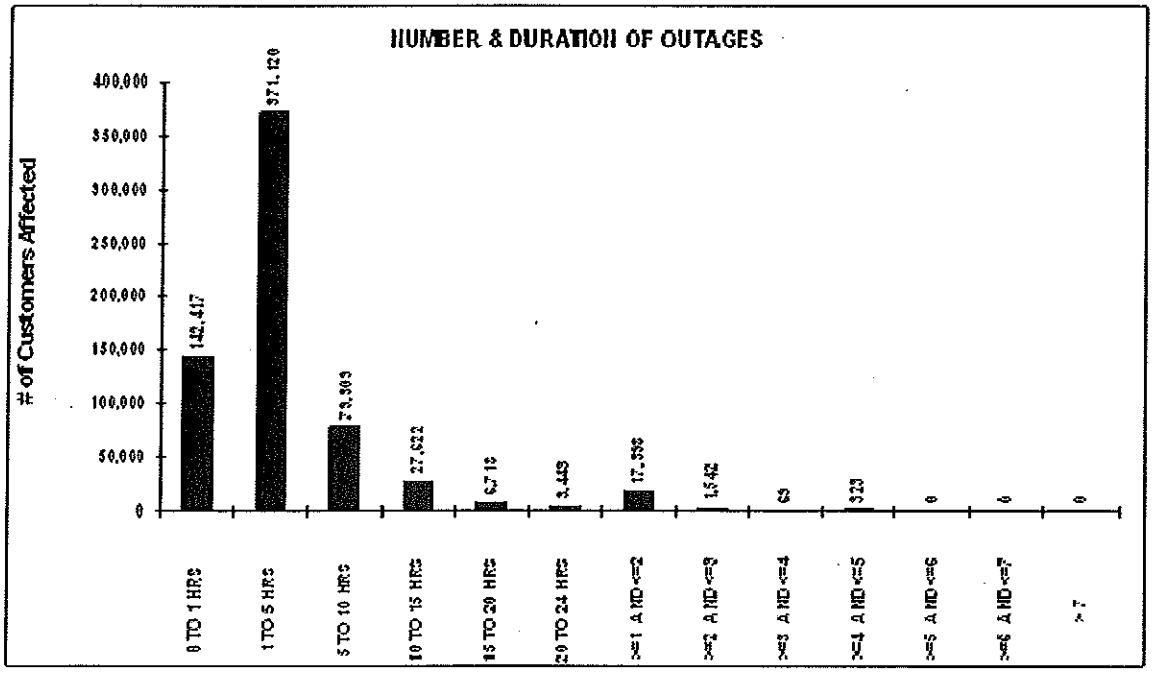
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	04/04/2006	Noted in Table 5	19,565
1 TO 5 HRS	"	"	60,412
5 TO 10 HRS	"	"	18,949
10 TO 15 HRS	"	"	1,507
15 TO 20 HRS	"	"	297
20 TO 24 HRS	"	"	2
>=1 AND <=2	"	"	1,219
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 *AND* <=7	"	"	0
> 7	"	"	0



	Major Event Days: 4/4/06 - 4/5/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	19,563	19.19%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	60,406	78.45%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	18,936	97.03%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	1,507	98.51%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	297	98.80%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	2	98.80%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1	98.81%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	0	98.81%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	0	98.81%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	7	98.81%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	551	99.35%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	656	100.00%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	0	100.00%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	4	100.00%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	0	100.00%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	100.00%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	100.00%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	100.00%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	100.00%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	100.00%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	0	100.00%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	0	100.00%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	100.00%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	100.00%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	100.00%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	0	100.00%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	0	100.00%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	100.00%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	100.00%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	100.00%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	0	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	101,930	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 11/ Figure 6 – July 21-27, 2006 Outage Event Duration Summary

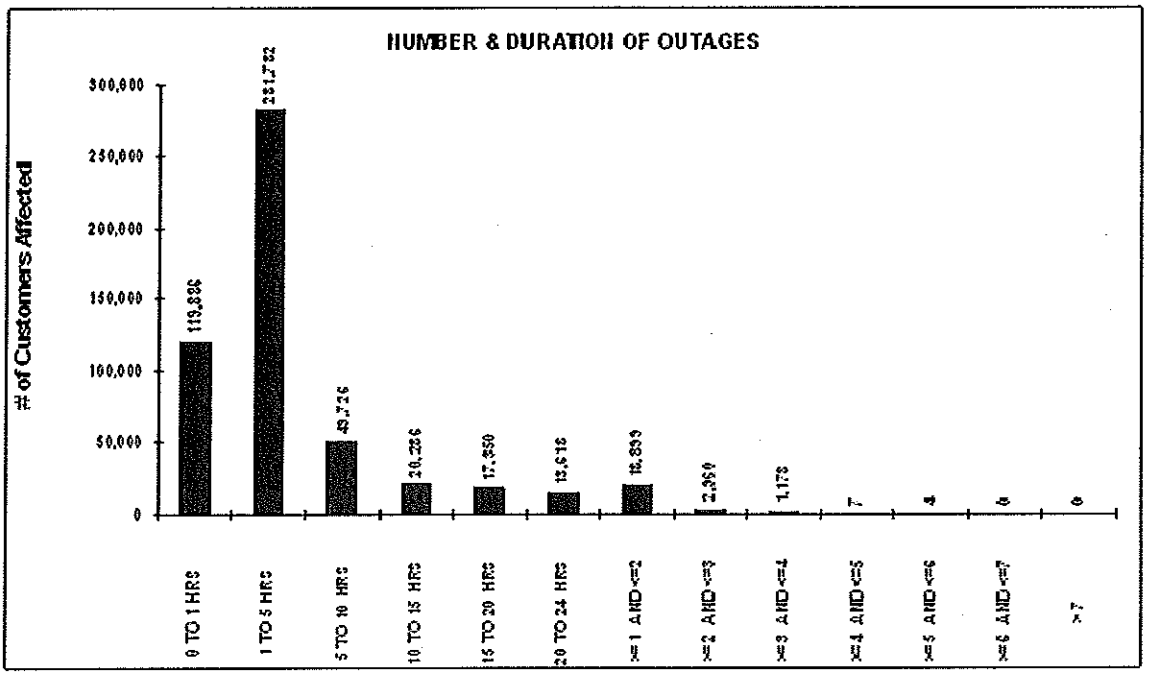
Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	07/20/2006	Noted in Table 5	142,417
1 TO 5 HRS	"	"	371,120
5 TO 10 HRS	"	"	79,309
10 TO 15 HRS	"	"	27,622
15 TO 20 HRS	"	"	6,718
20 TO 24 HRS	"	"	3,443
>=1 AND <=2	"	"	17,398
>=2 AND <=3	"	"	1,542
>=3 AND <=4	"	"	69
>=4 AND <=5	"	"	323
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 7/21/06 - 7/27/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	142,410	21.91%	93 TO 94 HRS	0	99.95%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	371,116	79.01%	94 TO 95 HRS	0	99.95%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	79,309	91.21%	95 TO 96 HRS	0	99.95%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	27,622	95.46%	96 TO 97 HRS	0	99.95%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	6,718	96.50%	97 TO 98 HRS	0	99.95%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	3,443	97.03%	98 TO 99 HRS	0	99.95%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	2,576	97.42%	99 TO 100 HRS	0	99.95%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	1,896	97.71%	100 TO 101 HRS	0	99.95%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	3,566	98.26%	101 TO 102 HRS	0	99.95%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	245	98.30%	102 TO 103 HRS	0	99.95%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	2,098	98.62%	103 TO 104 HRS	0	99.95%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	368	98.68%	104 TO 105 HRS	0	99.95%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	1,164	98.86%	105 TO 106 HRS	0	99.95%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	474	98.93%	106 TO 107 HRS	0	99.95%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	349	98.99%	107 TO 108 HRS	0	99.95%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	301	99.03%	108 TO 109 HRS	0	99.95%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	902	99.17%	109 TO 110 HRS	0	99.95%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	519	99.25%	110 TO 111 HRS	0	99.95%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	540	99.33%	111 TO 112 HRS	204	99.98%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	450	99.40%	112 TO 113 HRS	0	99.98%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	119	99.42%	113 TO 114 HRS	0	99.98%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	107	99.44%	114 TO 115 HRS	0	99.98%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	145	99.46%	115 TO 116 HRS	0	99.98%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	754	99.58%	116 TO 117 HRS	0	99.98%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	52	99.58%	117 TO 118 HRS	0	99.98%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	159	99.61%	118 TO 119 HRS	119	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	99	99.62%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	85	99.64%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	110	99.65%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	320	99.70%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	325	99.75%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	99.75%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	299	99.80%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	69	99.81%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	75	99.82%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	56	99.83%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	15	99.83%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	99.83%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	99.83%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	149	99.85%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	54	99.86%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	25	99.87%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	13	99.87%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	169	99.89%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	99.89%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	99.89%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	99.89%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	20	99.90%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	11	99.90%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	99.90%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	52	99.91%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.91%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	210	99.94%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	99.94%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	22	99.94%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	99.94%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	47	99.95%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	99.95%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	99.95%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	649,950	
77 TO 78 HRS	0	99.95%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	99.95%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	99.95%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.95%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	99.95%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	99.95%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	99.95%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.95%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.95%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.95%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.95%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	99.95%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.95%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	99.95%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	99.95%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.95%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 12/ Figure 7 – December 26-28, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/26/2006	Noted in Table 5	119,886
1 TO 5 HRS	"	"	281,782
5 TO 10 HRS	"	"	49,726
10 TO 15 HRS	"	"	20,286
15 TO 20 HRS	"	"	17,350
20 TO 24 HRS	"	"	13,618
>=1 AND <=2	"	"	18,899
>=2 AND <=3	"	"	2,960
>=3 AND <=4	"	"	1,178
>=4 AND <=5	"	"	7
>=5 AND <=6	"	"	4
>=6 AND <=7	"	"	0
> 7	"	"	0



	Major Event Days: 12/26/06 - 12/26/06										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	119,846	22.81%	93 TO 94 HRS	29	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	281,554	76.39%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	49,726	85.86%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	20,286	89.72%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	17,351	93.02%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	13,616	95.61%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,337	95.87%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	523	95.97%	100 TO 101 HRS	1	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	494	96.06%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	620	96.18%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	247	96.23%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	516	96.32%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	2,325	96.77%	105 TO 106 HRS	6	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	657	96.89%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,072	97.10%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	262	97.15%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	767	97.29%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	1,266	97.53%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	983	97.72%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	189	97.76%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	55	97.77%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	843	97.93%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	524	98.03%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	495	98.12%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	32	98.13%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	945	98.31%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	891	98.48%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	308	98.53%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	1,721	98.86%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	1,829	99.21%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	479	99.30%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	123	99.32%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	99.32%	125 TO 126 HRS	4	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	91	99.34%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	48	99.35%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	49	99.36%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	72	99.37%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	180	99.41%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	150	99.44%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	18	99.44%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	72	99.45%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	46	99.46%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	74	99.48%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	49	99.49%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	322	99.55%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	404	99.62%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	310	99.68%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	129	99.71%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	298	99.76%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	31	99.77%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	99.77%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	99.77%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	99.77%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	15	99.77%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	99.77%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	107	99.79%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	15	99.80%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	99.80%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	28	99.80%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	525,429	
77 TO 78 HRS	565	99.91%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	270	99.96%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	99.96%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	99.96%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	8	99.96%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	93	99.98%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	23	99.98%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	22	99.99%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.99%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	18	99.99%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.99%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	99.99%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	99.99%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	99.99%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	99.99%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	99.99%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

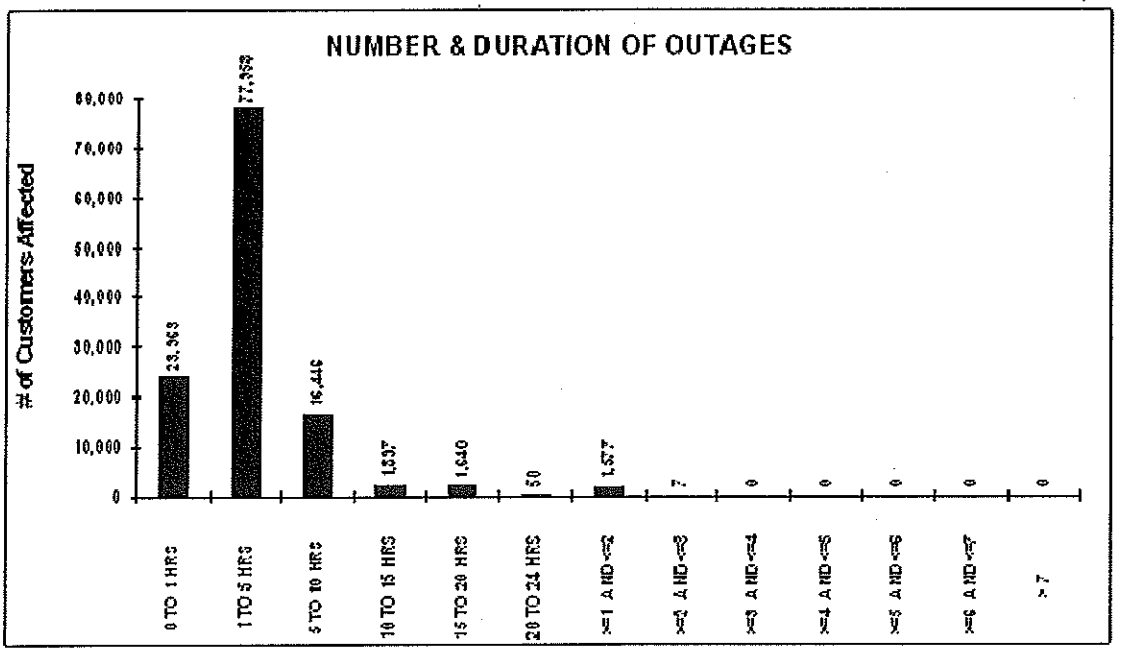
Of the ten largest events listed in Table 5, two events, December 18-20 and December 30-31, met the CPUC definition of a major event. Tables 6 & 7 indicate the number of customers without service at the requested periodic intervals for this event.

Table 6 – December 18-20, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/18/2005	Noted in Table 5	23,963
1 TO 5 HRS	"	"	77,958
5 TO 10 HRS	"	"	16,446
10 TO 15 HRS	"	"	1,897
15 TO 20 HRS	"	"	1,640
20 TO 24 HRS	"	"	50
>=1 AND <=2 Days	"	"	1,577
>=2 AND <=3 Days	"	"	7

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 18-20, 2005 Outage Event Duration Summary



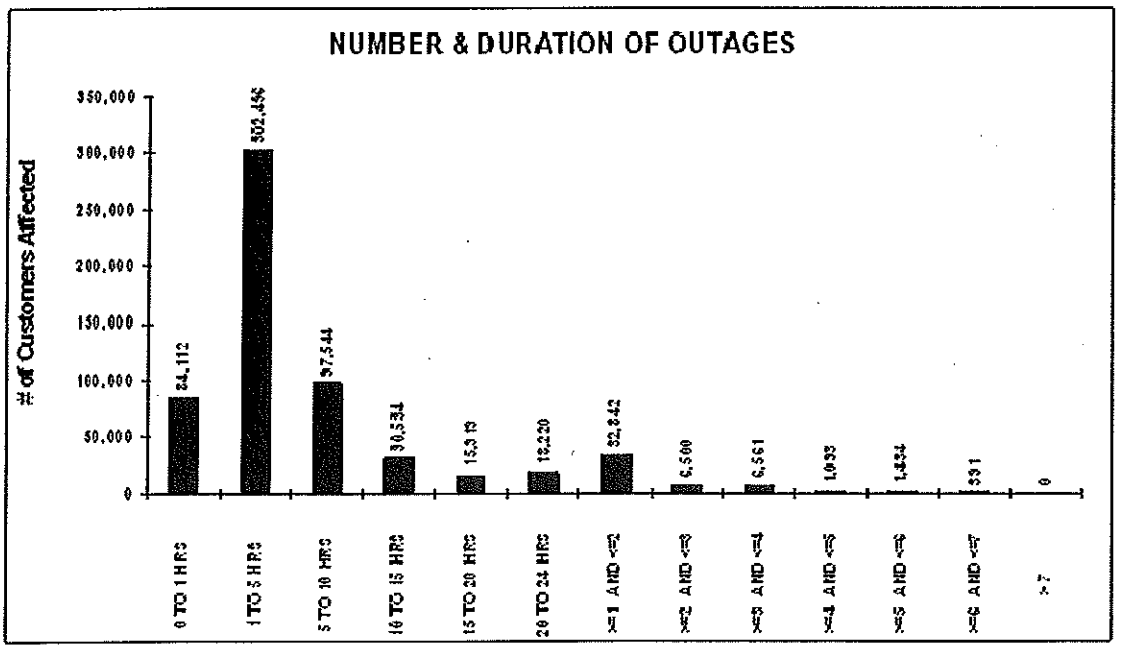
	Major Event Days: 12/18/05 - 12/20/05										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	23,963	19.40%	93 TO 94 HRS	0	100.00%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	77,958	82.50%	94 TO 95 HRS	0	100.00%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	16,446	95.81%	95 TO 96 HRS	0	100.00%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	1,897	97.35%	96 TO 97 HRS	0	100.00%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	1,640	98.68%	97 TO 98 HRS	0	100.00%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	50	98.72%	98 TO 99 HRS	0	100.00%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	0	98.72%	99 TO 100 HRS	0	100.00%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	10	98.73%	100 TO 101 HRS	0	100.00%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	106	98.81%	101 TO 102 HRS	0	100.00%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	59	98.86%	102 TO 103 HRS	0	100.00%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	640	99.38%	103 TO 104 HRS	0	100.00%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	560	99.83%	104 TO 105 HRS	0	100.00%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	8	99.84%	105 TO 106 HRS	0	100.00%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	0	99.84%	106 TO 107 HRS	0	100.00%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	2	99.84%	107 TO 108 HRS	0	100.00%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	0	99.84%	108 TO 109 HRS	0	100.00%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	0	99.84%	109 TO 110 HRS	0	100.00%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	0	99.84%	110 TO 111 HRS	0	100.00%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	0	99.84%	111 TO 112 HRS	0	100.00%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	0	99.84%	112 TO 113 HRS	0	100.00%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	16	99.85%	113 TO 114 HRS	0	100.00%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	6	99.86%	114 TO 115 HRS	0	100.00%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	0	99.86%	115 TO 116 HRS	0	100.00%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	0	99.86%	116 TO 117 HRS	0	100.00%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	0	99.86%	117 TO 118 HRS	0	100.00%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	137	99.97%	118 TO 119 HRS	0	100.00%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	33	99.99%	119 TO 120 HRS	0	100.00%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	0	99.99%	120 TO 121 HRS	0	100.00%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	0	99.99%	121 TO 122 HRS	0	100.00%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	0	99.99%	122 TO 123 HRS	0	100.00%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	7	100.00%	123 TO 124 HRS	0	100.00%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	0	100.00%	124 TO 125 HRS	0	100.00%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	0	100.00%	125 TO 126 HRS	0	100.00%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	0	100.00%	126 TO 127 HRS	0	100.00%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	0	100.00%	127 TO 128 HRS	0	100.00%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	0	100.00%	128 TO 129 HRS	0	100.00%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	0	100.00%	129 TO 130 HRS	0	100.00%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	0	100.00%	130 TO 131 HRS	0	100.00%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	0	100.00%	131 TO 132 HRS	0	100.00%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	0	100.00%	132 TO 133 HRS	0	100.00%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	0	100.00%	133 TO 134 HRS	0	100.00%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	0	100.00%	134 TO 135 HRS	0	100.00%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	0	100.00%	135 TO 136 HRS	0	100.00%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	0	100.00%	136 TO 137 HRS	0	100.00%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	0	100.00%	137 TO 138 HRS	0	100.00%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	0	100.00%	138 TO 139 HRS	0	100.00%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	0	100.00%	139 TO 140 HRS	0	100.00%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	0	100.00%	140 TO 141 HRS	0	100.00%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	0	100.00%	141 TO 142 HRS	0	100.00%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	0	100.00%	142 TO 143 HRS	0	100.00%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	0	100.00%	143 TO 144 HRS	0	100.00%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	100.00%	144 TO 145 HRS	0	100.00%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	0	100.00%	145 TO 146 HRS	0	100.00%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	0	100.00%	146 TO 147 HRS	0	100.00%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	0	100.00%	147 TO 148 HRS	0	100.00%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	0	100.00%	148 TO 149 HRS	0	100.00%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	0	100.00%	149 TO 150 HRS	0	100.00%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	0	100.00%	150 TO 151 HRS	0	100.00%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	0	100.00%	151 TO 152 HRS	0	100.00%	226 TO 227 HRS	0	100.00%	Total	123,538	
77 TO 78 HRS	0	100.00%	152 TO 153 HRS	0	100.00%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	0	100.00%	153 TO 154 HRS	0	100.00%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	0	100.00%	154 TO 155 HRS	0	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	0	100.00%	155 TO 156 HRS	0	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	0	100.00%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	0	100.00%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	0	100.00%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	100.00%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	100.00%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	100.00%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	100.00%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	0	100.00%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	0	100.00%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	0	100.00%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	0	100.00%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	0	100.00%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Table 7 – December 30-31, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Customers Affected
0 TO 1 HRS	12/30-12/31/2005	Noted in Table 5	84,112
1 TO 5 HRS	"	"	302,496
5 TO 10 HRS	"	"	97,544
10 TO 16 HRS	"	"	30,534
15 TO 20 HRS	"	"	15,919
20 TO 24 HRS	"	"	18,220
>=1 AND <=2 Days	"	"	32,842
>=2 AND <=3 Days	"	"	6,500
>=3 AND <=4 Days	"	"	6,561
>=4 AND <=5 Days	"	"	1,093
>=5 AND <=6 Days	"	"	1,434
>=6 AND <=7 Days	"	"	391
> 7 Days	"	"	0

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 2 - December 30-31, 2005 Outage Event Duration



	Major Event Days: 12/30/05 - 12/31/05										
Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %	Outage Duration	Customers Restored	Cumulative %
0 TO 1 HRS	84,112	14.07%	93 TO 94 HRS	15	99.51%	168 TO 169 HRS	0	100.00%	243 TO 244 HRS	0	100.00%
1 TO 5 HRS	302,498	64.69%	94 TO 95 HRS	0	99.51%	169 TO 170 HRS	0	100.00%	244 TO 245 HRS	0	100.00%
5 TO 10 HRS	97,544	81.01%	95 TO 96 HRS	31	99.51%	170 TO 171 HRS	0	100.00%	245 TO 246 HRS	0	100.00%
10 TO 15 HRS	30,534	86.12%	96 TO 97 HRS	0	99.51%	171 TO 172 HRS	0	100.00%	246 TO 247 HRS	0	100.00%
15 TO 20 HRS	15,919	88.78%	97 TO 98 HRS	2	99.51%	172 TO 173 HRS	0	100.00%	247 TO 248 HRS	0	100.00%
20 TO 24 HRS	18,220	91.83%	98 TO 99 HRS	0	99.51%	173 TO 174 HRS	0	100.00%	248 TO 249 HRS	0	100.00%
24 TO 25 HRS	1,482	92.08%	99 TO 100 HRS	109	99.53%	174 TO 175 HRS	0	100.00%	249 TO 250 HRS	0	100.00%
25 TO 26 HRS	2,143	92.44%	100 TO 101 HRS	96	99.55%	175 TO 176 HRS	0	100.00%	250 TO 251 HRS	0	100.00%
26 TO 27 HRS	1,813	92.74%	101 TO 102 HRS	107	99.56%	176 TO 177 HRS	0	100.00%	251 TO 252 HRS	0	100.00%
27 TO 28 HRS	3,278	93.29%	102 TO 103 HRS	47	99.57%	177 TO 178 HRS	0	100.00%	252 TO 253 HRS	0	100.00%
28 TO 29 HRS	5,595	94.23%	103 TO 104 HRS	28	99.58%	178 TO 179 HRS	0	100.00%	253 TO 254 HRS	0	100.00%
29 TO 30 HRS	867	94.37%	104 TO 105 HRS	122	99.60%	179 TO 180 HRS	0	100.00%	254 TO 255 HRS	0	100.00%
30 TO 31 HRS	2,452	94.78%	105 TO 106 HRS	27	99.60%	180 TO 181 HRS	0	100.00%	255 TO 256 HRS	0	100.00%
31 TO 32 HRS	1,458	95.02%	106 TO 107 HRS	24	99.61%	181 TO 182 HRS	0	100.00%	256 TO 257 HRS	0	100.00%
32 TO 33 HRS	1,671	95.30%	107 TO 108 HRS	119	99.63%	182 TO 183 HRS	0	100.00%	257 TO 258 HRS	0	100.00%
33 TO 34 HRS	1,951	95.63%	108 TO 109 HRS	5	99.63%	183 TO 184 HRS	0	100.00%	258 TO 259 HRS	0	100.00%
34 TO 35 HRS	1,346	95.86%	109 TO 110 HRS	226	99.66%	184 TO 185 HRS	0	100.00%	259 TO 260 HRS	0	100.00%
35 TO 36 HRS	797	95.99%	110 TO 111 HRS	0	99.66%	185 TO 186 HRS	0	100.00%	260 TO 261 HRS	0	100.00%
36 TO 37 HRS	172	96.02%	111 TO 112 HRS	52	99.67%	186 TO 187 HRS	0	100.00%	261 TO 262 HRS	0	100.00%
37 TO 38 HRS	1,343	96.24%	112 TO 113 HRS	0	99.67%	187 TO 188 HRS	0	100.00%	262 TO 263 HRS	0	100.00%
38 TO 39 HRS	4,793	97.05%	113 TO 114 HRS	3	99.67%	188 TO 189 HRS	0	100.00%	263 TO 264 HRS	0	100.00%
39 TO 40 HRS	241	97.09%	114 TO 115 HRS	56	99.68%	189 TO 190 HRS	0	100.00%	264 TO 265 HRS	0	100.00%
40 TO 41 HRS	561	97.18%	115 TO 116 HRS	0	99.68%	190 TO 191 HRS	0	100.00%	265 TO 266 HRS	0	100.00%
41 TO 42 HRS	18	97.18%	116 TO 117 HRS	0	99.68%	191 TO 192 HRS	0	100.00%	266 TO 267 HRS	0	100.00%
42 TO 43 HRS	4	97.18%	117 TO 118 HRS	55	99.69%	192 TO 193 HRS	0	100.00%	267 TO 268 HRS	0	100.00%
43 TO 44 HRS	7	97.18%	118 TO 119 HRS	0	99.69%	193 TO 194 HRS	0	100.00%	268 TO 269 HRS	0	100.00%
44 TO 45 HRS	306	97.24%	119 TO 120 HRS	15	99.69%	194 TO 195 HRS	0	100.00%	269 TO 270 HRS	0	100.00%
45 TO 46 HRS	304	97.29%	120 TO 121 HRS	77	99.71%	195 TO 196 HRS	0	100.00%	270 TO 271 HRS	0	100.00%
46 TO 47 HRS	99	97.30%	121 TO 122 HRS	16	99.71%	196 TO 197 HRS	0	100.00%	271 TO 272 HRS	0	100.00%
47 TO 48 HRS	141	97.33%	122 TO 123 HRS	323	99.76%	197 TO 198 HRS	0	100.00%	272 TO 273 HRS	0	100.00%
48 TO 49 HRS	521	97.41%	123 TO 124 HRS	0	99.76%	198 TO 199 HRS	0	100.00%	273 TO 274 HRS	0	100.00%
49 TO 50 HRS	344	97.47%	124 TO 125 HRS	2	99.76%	199 TO 200 HRS	0	100.00%	274 TO 275 HRS	0	100.00%
50 TO 51 HRS	217	97.51%	125 TO 126 HRS	507	99.85%	200 TO 201 HRS	0	100.00%	275 TO 276 HRS	0	100.00%
51 TO 52 HRS	267	97.55%	126 TO 127 HRS	275	99.90%	201 TO 202 HRS	0	100.00%	276 TO 277 HRS	0	100.00%
52 TO 53 HRS	497	97.64%	127 TO 128 HRS	0	99.90%	202 TO 203 HRS	0	100.00%	277 TO 278 HRS	0	100.00%
53 TO 54 HRS	419	97.71%	128 TO 129 HRS	145	99.92%	203 TO 204 HRS	0	100.00%	278 TO 279 HRS	0	100.00%
54 TO 55 HRS	413	97.77%	129 TO 130 HRS	31	99.92%	204 TO 205 HRS	0	100.00%	279 TO 280 HRS	0	100.00%
55 TO 56 HRS	209	97.81%	130 TO 131 HRS	0	99.92%	205 TO 206 HRS	0	100.00%	280 TO 281 HRS	0	100.00%
56 TO 57 HRS	145	97.83%	131 TO 132 HRS	0	99.92%	206 TO 207 HRS	0	100.00%	281 TO 282 HRS	0	100.00%
57 TO 58 HRS	271	97.88%	132 TO 133 HRS	26	99.93%	207 TO 208 HRS	0	100.00%	282 TO 283 HRS	0	100.00%
58 TO 59 HRS	1,692	98.16%	133 TO 134 HRS	0	99.93%	208 TO 209 HRS	0	100.00%	283 TO 284 HRS	0	100.00%
59 TO 60 HRS	382	98.23%	134 TO 135 HRS	0	99.93%	209 TO 210 HRS	0	100.00%	284 TO 285 HRS	0	100.00%
60 TO 61 HRS	111	98.24%	135 TO 136 HRS	0	99.93%	210 TO 211 HRS	0	100.00%	285 TO 286 HRS	0	100.00%
61 TO 62 HRS	435	98.32%	136 TO 137 HRS	0	99.93%	211 TO 212 HRS	0	100.00%	286 TO 287 HRS	0	100.00%
62 TO 63 HRS	6	98.32%	137 TO 138 HRS	0	99.93%	212 TO 213 HRS	0	100.00%	287 TO 288 HRS	0	100.00%
63 TO 64 HRS	20	98.32%	138 TO 139 HRS	1	99.93%	213 TO 214 HRS	0	100.00%	288 TO 289 HRS	0	100.00%
64 TO 65 HRS	64	98.33%	139 TO 140 HRS	31	99.93%	214 TO 215 HRS	0	100.00%	289 TO 290 HRS	0	100.00%
65 TO 66 HRS	244	98.37%	140 TO 141 HRS	0	99.93%	215 TO 216 HRS	0	100.00%	290 TO 291 HRS	0	100.00%
66 TO 67 HRS	151	98.40%	141 TO 142 HRS	0	99.93%	216 TO 217 HRS	0	100.00%	291 TO 292 HRS	0	100.00%
67 TO 68 HRS	18	98.40%	142 TO 143 HRS	0	99.93%	217 TO 218 HRS	0	100.00%	292 TO 293 HRS	0	100.00%
68 TO 69 HRS	9	98.40%	143 TO 144 HRS	0	99.93%	218 TO 219 HRS	0	100.00%	293 TO 294 HRS	0	100.00%
69 TO 70 HRS	0	98.40%	144 TO 145 HRS	0	99.93%	219 TO 220 HRS	0	100.00%	294 TO 295 HRS	0	100.00%
70 TO 71 HRS	7	98.40%	145 TO 146 HRS	28	99.94%	220 TO 221 HRS	0	100.00%	295 TO 296 HRS	0	100.00%
71 TO 72 HRS	58	98.41%	146 TO 147 HRS	8	99.94%	221 TO 222 HRS	0	100.00%	296 TO 297 HRS	0	100.00%
72 TO 73 HRS	35	98.42%	147 TO 148 HRS	1	99.94%	222 TO 223 HRS	0	100.00%	297 TO 298 HRS	0	100.00%
73 TO 74 HRS	24	98.42%	148 TO 149 HRS	68	99.95%	223 TO 224 HRS	0	100.00%	298 TO 299 HRS	0	100.00%
74 TO 75 HRS	9	98.43%	149 TO 150 HRS	113	99.97%	224 TO 225 HRS	0	100.00%	299 TO 300 HRS	0	100.00%
75 TO 76 HRS	111	98.44%	150 TO 151 HRS	8	99.97%	225 TO 226 HRS	0	100.00%	> 300 HRS	0	100.00%
76 TO 77 HRS	15	98.45%	151 TO 152 HRS	19	99.98%	226 TO 227 HRS	0	100.00%	Total	597,646	
77 TO 78 HRS	20	98.45%	152 TO 153 HRS	0	99.98%	227 TO 228 HRS	0	100.00%			
78 TO 79 HRS	2,434	98.86%	153 TO 154 HRS	0	99.98%	228 TO 229 HRS	0	100.00%			
79 TO 80 HRS	427	98.93%	154 TO 155 HRS	134	100.00%	229 TO 230 HRS	0	100.00%			
80 TO 81 HRS	273	98.97%	155 TO 156 HRS	12	100.00%	230 TO 231 HRS	0	100.00%			
81 TO 82 HRS	441	99.05%	156 TO 157 HRS	0	100.00%	231 TO 232 HRS	0	100.00%			
82 TO 83 HRS	1,348	99.27%	157 TO 158 HRS	0	100.00%	232 TO 233 HRS	0	100.00%			
83 TO 84 HRS	95	99.29%	158 TO 159 HRS	0	100.00%	233 TO 234 HRS	0	100.00%			
84 TO 85 HRS	0	99.29%	159 TO 160 HRS	0	100.00%	234 TO 235 HRS	0	100.00%			
85 TO 86 HRS	0	99.29%	160 TO 161 HRS	0	100.00%	235 TO 236 HRS	0	100.00%			
86 TO 87 HRS	0	99.29%	161 TO 162 HRS	0	100.00%	236 TO 237 HRS	0	100.00%			
87 TO 88 HRS	0	99.29%	162 TO 163 HRS	0	100.00%	237 TO 238 HRS	0	100.00%			
88 TO 89 HRS	473	99.37%	163 TO 164 HRS	0	100.00%	238 TO 239 HRS	0	100.00%			
89 TO 90 HRS	385	99.43%	164 TO 165 HRS	0	100.00%	239 TO 240 HRS	0	100.00%			
90 TO 91 HRS	17	99.44%	165 TO 166 HRS	0	100.00%	240 TO 241 HRS	0	100.00%			
91 TO 92 HRS	122	99.46%	166 TO 167 HRS	0	100.00%	241 TO 242 HRS	0	100.00%			
92 TO 93 HRS	288	99.50%	167 TO 168 HRS	0	100.00%	242 TO 243 HRS	0	100.00%			

Of the ten largest events listed in 2003, only one event, the December 22 earthquake met the CPUC definition of a major event. Table 5 indicates the number of customers without service at the requested periodic intervals for this request.

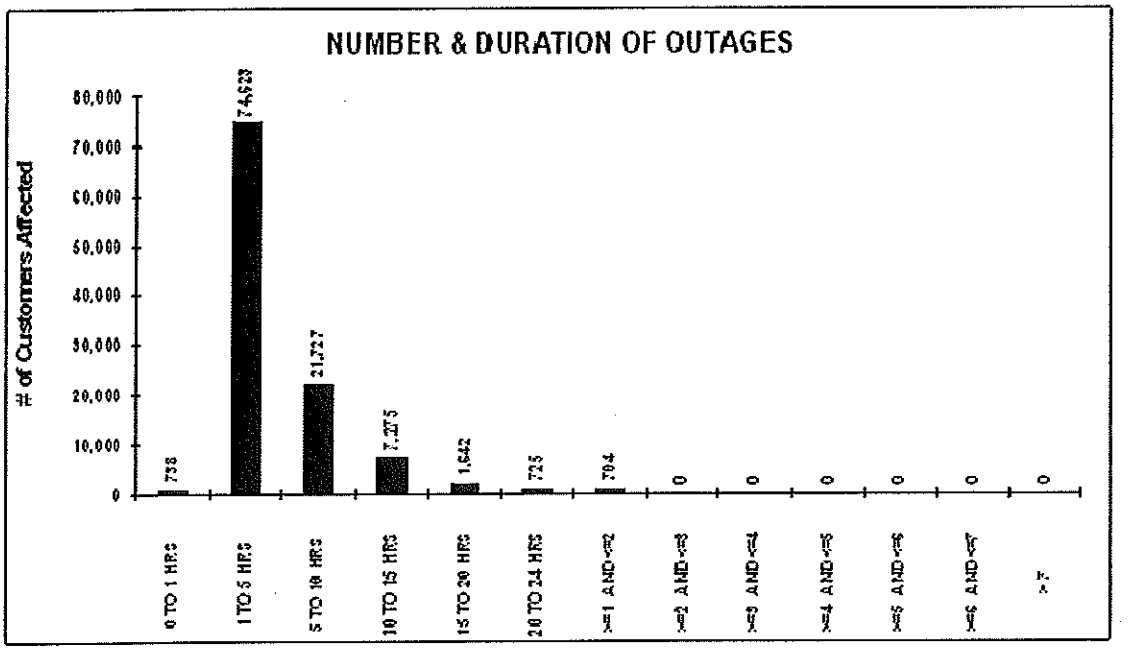
Table 5 – December 22, 2003 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/22/2003	Noted in table 4	738
1 TO 5 HRS	"	"	74,623
5 TO 10 HRS	"	"	21,727
10 TO 15 HRS	"	"	7,275
15 TO 20 HRS	"	"	1,642
20 TO 24 HRS	"	"	725
>=1 AND <=2 Days	"	"	704

No

te: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 22, 2003 Outage Event Duration Summary



Of the ten largest events listed in Table 4, two events, November 7-8 and December 13-21, met the CPUC definition of a major event. Tables 5 & 6 indicate the number of customers without service at the requested periodic intervals for this event.

Table 5 – November 7-8, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	11/7-8/2002	Noted in Table 4	148,826
1 TO 5 HRS	"	"	434,220
5 TO 10 HRS	"	"	147,786
10 TO 15 HRS	"	"	61,686
15 TO 20 HRS	"	"	29,368
20 TO 24 HRS	"	"	13,523
>=1 AND <=2 Days	"	"	40,519
>=2 AND <=3 Days	"	"	2,413
>=3 AND <=4 Days	"	"	673
>=4 AND <=5 Days	"	"	248
>=5 AND <=6 Days	"	"	50

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 – November 7-8, 2002 Outage Event Duration Summary

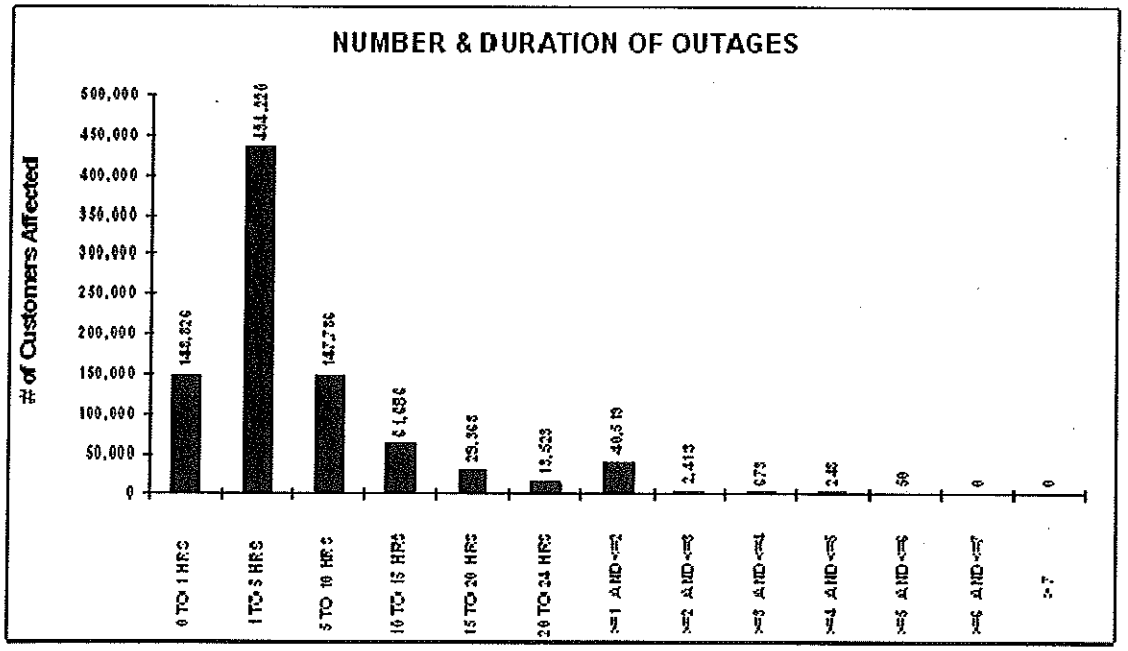
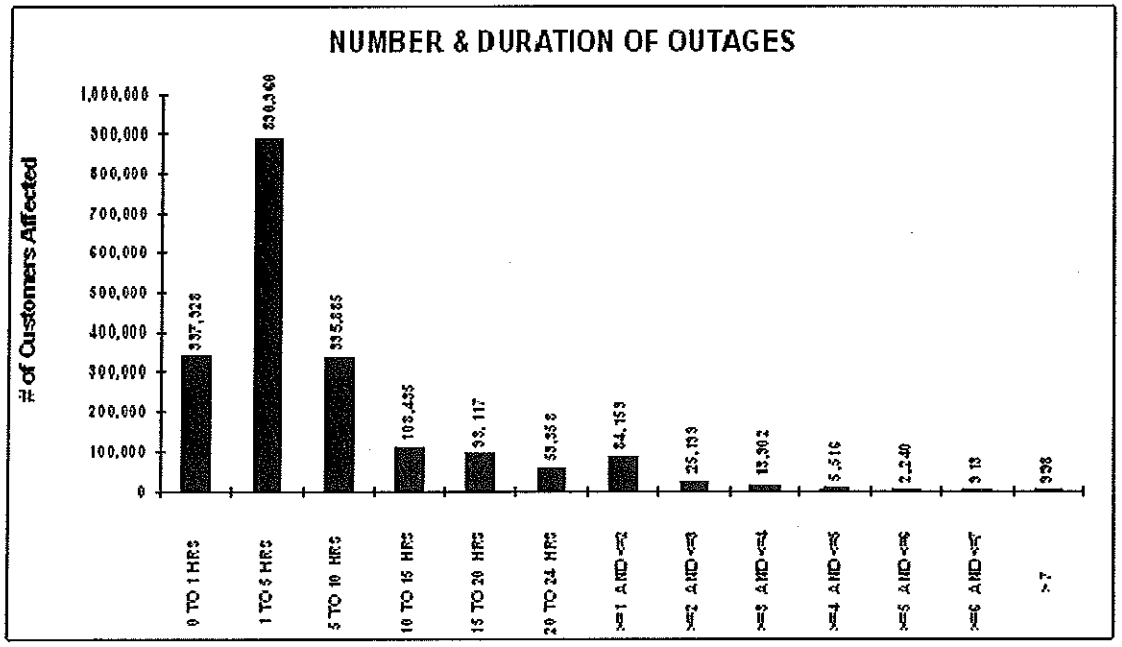


Table 6 – December 13-21, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	12/13-21/2002	Noted in Table 4	337,928
1 TO 5 HRS	"	"	890,960
5 TO 10 HRS	"	"	335,885
10 TO 16 HRS	"	"	108,435
15 TO 20 HRS	"	"	93,117
20 TO 24 HRS	"	"	53,358
>=1 AND <=2 Days	"	"	84,153
>=2 AND <=3 Days	"	"	25,199
>=3 AND <=4 Days	"	"	13,902
>=4 AND <=5 Days	"	"	5,516
>=5 AND <=6 Days	"	"	2,240
>=6 AND <=7 Days	"	"	913
> 7 Days	"	"	998

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 2 – December 13-21, 2002 Outage Event Duration Summary



SECTION 8

Attachment 5

SECTION C

Customers Experiencing >12 Sustained Outages

Customers Experiencing > 12 Sustained Outages During 2011

Table 9 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2011. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 9 – Customers Experiencing > 12 Sustained Outages During 2011

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	CAMP EVERS 2105	35
CENTRAL COAST	ROB ROY 2105	21
DE ANZA	LOS GATOS 1107	192
HUMBOLDT	GARBERVILLE 1102	579
KERN	POSO MOUNTAIN 2101	7
LOS PADRES	SISQUOC 1102	3
NORTH BAY	ALTO 1124	15
NORTH BAY	CALISTOGA 1101	9
NORTH BAY	MONTICELLO 1101	10
NORTH BAY	SILVERADO 2104	121
NORTH VALLEY	CHALLENGE 1101	451
NORTH VALLEY	KANAKA 1101	17
NORTH VALLEY	ORO FINO 1102	56
NORTH VALLEY	VOLTA 1101	464
NORTH VALLEY	WYANDOTTE 1109	4
PENINSULA	WOODSIDE 1101	1
SACRAMENTO	GRAND ISLAND 2225	9
SACRAMENTO	JAMESON 1104	32
SACRAMENTO	KNIGHTS LANDING 1101	2
SIERRA	ALLEGHANY 1101	55
SIERRA	APPLE HILL 2102	272
SIERRA	BONNIE NOOK 1101	12
SIERRA	BONNIE NOOK 1102	60
SIERRA	BRUNSWICK 1102	1
SIERRA	EL DORADO P H 2101	908
SIERRA	PEASE 1104	23
SIERRA	PLACERVILLE 2106	684
SONOMA	COTATI 1103	22
STOCKTON	LODI 1102	4
STOCKTON	SALT SPRINGS 2102	1,154
YOSEMITE	OAKHURST 1103	23
YOSEMITE	RACETRACK SUB 1704	136
YOSEMITE	WESTLEY 1103	145

Customers Experiencing > 12 Sustained Outages During 2010

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2011. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 8 – Customers Experiencing > 12 Sustained Outages During 2010

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1101	61
CENTRAL COAST	BIG BASIN 1102	40
CENTRAL COAST	CAMP EVERS 2105	33
CENTRAL COAST	POINT MORETTI 1101	29
CENTRAL COAST	ROB ROY 2104	56
CENTRAL COAST	SAN ARDO 1102	14
CENTRAL COAST	WATSONVILLE 2101	1
DE ANZA	CAMP EVERS 2106	79
DE ANZA	LOS GATOS 1106	1
DE ANZA	LOS GATOS 1107	156
DIABLO	CONTRA COSTA 2109	16
DIABLO	KIRKER SUB 2104	3
FRESNO	DUNLAP 1102	57
FRESNO	DUNLAP 1103	318
NORTH BAY	CALISTOGA 1101	14
NORTH BAY	OLEMA 1101	13
NORTH BAY	SILVERADO 2104	2
NORTH COAST	FORT BRAGG STA A 1101	3
NORTH COAST	GARBERVILLE 1101	71
NORTH COAST	GARBERVILLE 1102	234
NORTH COAST	LAKEVILLE 1101	10
NORTH VALLEY	CHALLENGE 1101	19
NORTH VALLEY	ORO FINO 1102	99
PENINSULA	MENLO 1103	22
SACRAMENTO	DIXON 1103	13
SACRAMENTO	GRAND ISLAND 2225	3
SACRAMENTO	MADISON 2101	5
SIERRA	ALLEGHANY 1101	197
SIERRA	APPLE HILL 2102	16
SIERRA	EL DORADO P H 2101	1,162
SIERRA	PLACERVILLE 2106	255
STOCKTON	LOCKEFORD SUB 2102	7
STOCKTON	MANTECA 1706	3
STOCKTON	SALT SPRINGS 2102	170
STOCKTON	STANISLAUS 1702	532
YOSEMITE	CURTIS 1703	38
YOSEMITE	MARIPOSA 2101	9
YOSEMITE	MIWUK SUB 1701	31

Customers Experiencing > 12 Sustained Outages During 2009

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2009. Please note, this list does not mean that all the customers on the circuit experienced more than ,12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 8 – Customers Experiencing > 12 Sustained Outages During 2009

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 1101	169
CENTRAL COAST	BIG BASIN 1102	14
CENTRAL COAST	DOLAN ROAD 1104	1
CENTRAL COAST	POINT MORETTI 1101	8
CENTRAL COAST	ROB ROY 2105	13
DE ANZA	LOS GATOS 1107	441
LOS PADRES	ZACA 1101	1
NORTH COAST	FITCH MOUNTAIN 1113	6
NORTH COAST	GARBERVILLE 1102	321
NORTH VALLEY	CHALLENGE 1101	2
SACRAMENTO	ARBUCKLE 1102	4
SACRAMENTO	COLUSA 1103	6
SACRAMENTO	GRAND ISLAND 2226	13
SACRAMENTO	GRAND ISLAND 2227	7
SACRAMENTO	JAMESON 1104	7
SACRAMENTO	MADISON 2101	15
SIERRA	ALLEGHANY 1101	8
SIERRA	EL DORADO P H 2101	294
STOCKTON	FROGTOWN 1702	86
STOCKTON	WEST POINT 1102	1

Customers Experiencing > 12 Sustained Outages During 2008

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2008. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2008

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	6
CENTRAL COAST	BEN LOMOND 1101	699
CENTRAL COAST	BIG BASIN 1101	223
CENTRAL COAST	BIG BASIN 1102	16
CENTRAL COAST	CAMP EVERS 2105	92
CENTRAL COAST	LOMPICO 0401	20
CENTRAL COAST	OTTER 1102	194
CENTRAL COAST	POINT MORETTI 1101	14
CENTRAL COAST	ROB ROY 2104	354
CENTRAL COAST	SOLEDAD 2101	99
DE ANZA	CAMP EVERS 2106	43
DE ANZA	LOS GATOS 1106	166
DE ANZA	LOS GATOS 1107	45
LOS PADRES	SANTA MARIA 1105	306
LOS PADRES	SISQUOC 1102	2
NORTH BAY	NAPA 1107	29
NORTH BAY	SAUSALITO 1102	13
NORTH COAST	ARCATA 1121	7
NORTH COAST	BRIDGEVILLE 1101	6
NORTH COAST	EEL RIVER 1101	10
NORTH COAST	GARBERVILLE 1102	425
NORTH COAST	HOOPA 1101	223
NORTH COAST	OLEMA 1101	14
NORTH COAST	POINT ARENA 1101	3
NORTH COAST	RIO DELL 1102	11
NORTH COAST	WILLOW CREEK 1101	35
NORTH VALLEY	LOGAN CREEK 2102	1
NORTH VALLEY	NORD 1104	1
PENINSULA	MENLO 1103	15
SACRAMENTO	KNIGHTS LANDING 1101	3
SACRAMENTO	MERIDIAN 1101	13
SACRAMENTO	RICE 1101	5
SACRAMENTO	RICE 1103	4
SIERRA	BRUNSWICK 1105	12
SIERRA	EAST NICOLAUS 1101	6
SIERRA	EL DORADO P H 2101	127
SIERRA	MOUNTAIN QUARRIES 2101	65
SIERRA	PLACERVILLE 2106	395
SIERRA	TUDOR 1101	9
STOCKTON	CORRAL 1103	19
YOSEMITE	CURTIS 1703	45
YOSEMITE	MERCED 1114	26
YOSEMITE	ORO LOMA 1106	2

Customers Experiencing > 12 Sustained Outages During 2007

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2007. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2007

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	DOLAN ROAD 1104	33
CENTRAL COAST	ROB ROY 2104	53
DIABLO	BRENTWOOD SUB 2105	17
LOS PADRES	SISQUOC 1102	1
LOS PADRES	ZACA 1101	1
NORTH BAY	NOVATO 1104	8
NORTH BAY	SILVERADO 2102	16
NORTH COAST	BRIDGEVILLE 1102	9
NORTH COAST	MONTE RIO 1111	8
NORTH VALLEY	CHALLENGE 1101	350
NORTH VALLEY	GERBER 1102	22
NORTH VALLEY	JACINTO 1101	2
SACRAMENTO	CORDELIA 1104	57
SACRAMENTO	JAMESON 1104	9
SACRAMENTO	PEABODY 2107	72
SIERRA	EL DORADO P H 2101	10
YOSEMITE	COTTLE 1702	63
YOSEMITE	FIGARDEN SUB. 2110	2

Customers Experiencing > 12 Sustained Outages During 2006

Table 14 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2006. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 14 – Customers Experiencing > 12 Sustained Outages During 2006

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	220
CENTRAL COAST	BEN LOMOND 1101	620
CENTRAL COAST	BIG BASIN 1102	1
CENTRAL COAST	BIG TREES 0402	73
CENTRAL COAST	CAMP EVERS 2105	246
CENTRAL COAST	CASTROVILLE 2103	11
CENTRAL COAST	GREEN VALLEY 2103	4
CENTRAL COAST	HOLLISTER 2104	30
CENTRAL COAST	LOMPICO 0401	175
CENTRAL COAST	ROB ROY 2104	160
DE ANZA	CAMP EVERS 2106	818
DE ANZA	LOS GATOS 1107	58
DIABLO	KIRKER SUB 2104	395
FRESNO	WOODWARD 2108	1
LOS PADRES	CAYUCOS 1102	3
LOS PADRES	OCEANO 1101	20
LOS PADRES	OILFIELDS 1103	57
LOS PADRES	SANTA MARIA 1108	77
LOS PADRES	SISQUOC 1102	4
NORTH BAY	OLEMA 1101	13
NORTH COAST	ARCATA 1121	7
NORTH COAST	COTATI 1103	14
NORTH COAST	GARBERVILLE 1101	19
NORTH COAST	GARBERVILLE 1102	19
NORTH COAST	HOOPA 1101	74
NORTH COAST	JANES CREEK 1103	35
NORTH COAST	MONTE RIO 1111	86
NORTH COAST	RIO DELL 1102	22
NORTH COAST	SONOMA 1107	11
NORTH VALLEY	ESQUON 1103	20
PENINSULA	MENLO 1103	2
SACRAMENTO	DEEPWATER 1107	26
SACRAMENTO	GRAND ISLAND 2225	86
SACRAMENTO	PEABODY 2107	4
SACRAMENTO	PUTAH CREEK 1102	99
SIERRA	APPLE HILL 2102	195
SIERRA	EL DORADO P H 2101	970
SIERRA	PLACERVILLE 2106	309
STOCKTON	MANTECA 1704	64
STOCKTON	MANTECA 1705	140

Customers Experiencing > 12 Sustained Outages During 2005

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2005. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 8 – Customers Experiencing > 12 Sustained Outages During 2005

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1102	13
CENTRAL COAST	BIG TREES 0402	32
CENTRAL COAST	CAMP EVERS 2104	93
CENTRAL COAST	GREEN VALLEY 2101	1
CENTRAL COAST	ROB ROY 2104	71
CENTRAL COAST	ROB ROY 2105	13
CENTRAL COAST	VIEJO 2202	30
DIABLO	BRENTWOOD SUB 2105	1
DIABLO	CONTRA COSTA 2108	21
FRESNO	DUNLAP 1103	270
FRESNO	KINGSBURG 1116	967
KERN	TEJON 1102	249
LOS PADRES	OILFIELDS 1103	28
LOS PADRES	SISQUOC 1103	151
LOS PADRES	ZACA 1101	1
NORTH BAY	CALISTOGA 1101	49
NORTH BAY	PUEBLO 2103	32
NORTH BAY	SILVERADO 2104	146
NORTH COAST	EEL RIVER 1101	122
NORTH COAST	FRUITLAND 1142	13
NORTH COAST	GARBERVILLE 1101	12
NORTH COAST	GARBERVILLE 1102	10
NORTH COAST	HARTLEY 1101	3
NORTH COAST	MONTE RIO 1111	8
NORTH COAST	OLEMA 1101	10
NORTH COAST	RIO DELL 1102	2
NORTH COAST	WILLITS 1103	6
NORTH COAST	WILLOW CREEK 1101	3
SACRAMENTO	GRAND ISLAND 2224	244
SACRAMENTO	MADISON 1105	14
SACRAMENTO	PUTAH CREEK 1102	44
SIERRA	EL DORADO P H 2101	734
STOCKTON	COLONY 1102	25
STOCKTON	FROGTOWN 1702	19
STOCKTON	MIDDLE RIVER 1101	4
STOCKTON	OLETA 1101	40
YOSEMITE	OAKHURST 1103	4
YOSEMITE	PEORIA FLAT 1701	117
YOSEMITE	SPRING GAP 1701	37
YOSEMITE	STOREY 1109	25
YOSEMITE	VALLEY HOME 1701	30

Customers Experiencing > 12 Sustained Outages During 2004

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2004. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2004

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	11
CENTRAL COAST	BEN LOMOND 1101	284
CENTRAL COAST	CAMP EVERS 2104	343
CENTRAL COAST	CAMP EVERS 2105	105
CENTRAL COAST	FOREST 0422	30
CENTRAL COAST	GREEN VALLEY 2101	39
CENTRAL COAST	LOS OSITOS 2101	108
CENTRAL COAST	POINT MORETTI 1101	21
CENTRAL COAST	ROB ROY 2104	66
CENTRAL COAST	SOLEDAD 2101	12
DE ANZA	CAMP EVERS 2106	408
DIABLO	BRENTWOOD SUB 2113	16
LOS PADRES	SISQUOC 1103	151
NORTH BAY	MONTICELLO 1101	23
NORTH BAY	NAPA 1102	10
NORTH COAST	GARBERVILLE 1101	29
NORTH COAST	GARBERVILLE 1102	13
NORTH COAST	MOLINO 1101	77
NORTH COAST	OLEMA 1101	18
NORTH COAST	TRINIDAD 1102	13
NORTH VALLEY	LOGAN CREEK 2101	54
NORTH VALLEY	ORO FINO 1102	279
SIERRA	ALLEGHANY 1101	152
STOCKTON	AVENA 1702	17
STOCKTON	WEST POINT 1101	26
YOSEMITE	RIVERBANK 1713	144

Customers Experiencing > 12 Sustained Outages During 2003

Table 6 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2003. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 6 - Customers Experiencing > 12 Sustained Outages During 2003

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	6
CENTRAL COAST	BIG BASIN 1101	35
CENTRAL COAST	CAMP EVERS 2104	22
CENTRAL COAST	GREEN VALLEY 2101	38
CENTRAL COAST	LOS OSITOS 2101	6
DE ANZA	CAMP EVERS 2105	90
DE ANZA	LOS GATOS 1106	191
DIABLO	BRENTWOOD SUB 2113	6
DIABLO	CLAYTON 2212	16
NORTH COAST	BRIDGEVILLE 1102	1
NORTH COAST	EEL RIVER 1101	121
NORTH COAST	GARBERVILLE 1101	5
NORTH COAST	GARBERVILLE 1102	7
NORTH COAST	HARTLEY 1101	27
NORTH COAST	MENDOCINO 1101	145
NORTH COAST	MONTE RIO 1111	78
SACRAMENTO	MADISON 1105	15
STOCKTON	HERDLYN 1103	32
YOSEMITE	GUSTINE 1102	2
YOSEMITE	MENDOTA 1102	239

Customers Experiencing > 12 Sustained Outages During 2002

Table 7 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2002. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 7 - Customers Experiencing > 12 Sustained Outages During 2002

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	CAMP EVERS 2104	90
CENTRAL COAST	LOMPICO 0401	4
DIABLO	CONTRA COSTA 2109	8
FRESNO	DEVILS DEN 1101	1
NORTH BAY	CALISTOGA 1102	52
NORTH BAY	SILVERADO 2105	31
NORTH COAST	EEL RIVER 1101	89
NORTH COAST	GARBERVILLE 1101	38
NORTH COAST	GARBERVILLE 1102	76
NORTH COAST	MONTE RIO 1111	2
NORTH VALLEY	LOGAN CREEK 2101	53
SAN JOSE	LLAGAS 2104	28
YOSEMITE	COTTLE 1702	3

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HAND DELIVERED

Reggie Chaney
Director of Engineering
Public Service Commission of Kentucky
211 Sower Boulevard
Frankfort, Kentucky 40601

RE: Kentucky Power Company's Annual Reliability Report and Distribution Vegetation Management Plan

Dear Mr. Chaney:

Enclosed please find Kentucky Power Company's filing in response to the Commission's October 26, 2006 Order in Case No. 2006-00494.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Mark R. Overstreet

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KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Kentucky Power Company
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SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2008

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	26.306
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1/1/2003
LAST DATE USED TO DETERMINE T_{MED}	3.3	12/31/2007
NUMBER OF MED IN REPORT YEAR	3.4	1

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	496.3
SAIFI	4.2	2.904
CAIDI	4.3	170.9

Including MED (Optional)

SAIDI	4.4	531.2
SAIFI	4.5	2.991
CAIDI	4.6	177.6

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES

Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Veg Outside R/W	5.1.1	177.2	Veg Outside R/W	5.2.1	0.741
Equipment Failure	5.1.2	90.5	Equipment Failure	5.2.2	0.627
Veg Inside R/W	5.1.3	74.6	Veg Inside R/W	5.2.3	0.383
Station - Distribution	5.1.4	28.3	Scheduled	5.2.4	0.261
Scheduled	5.1.5	26.2	Station - Distribution	5.2.5	0.241
Vehicle Accident	5.1.6	22.4	Transmission	5.2.6	0.139
Transmission	5.1.7	19.0	Vehicle Accident	5.2.7	0.109
Weather - Unknown	5.1.8	15.8	Weather - Unknown	5.2.8	0.089
Unknown (Non-Weather)	5.1.9	7.7	Unknown (Non-Weather)	5.2.9	0.065
High Winds	5.1.10	7.1	Vandalism	5.2.10	0.046

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
3404002	6.1.1	3603.3	Weather - Lightning
3307302	6.1.2	2286.2	Tree Out of ROW
3000601	6.1.3	2099.4	Scheduled - Company
3310501	6.1.4	2016.4	Tree Out of ROW
3308603	6.1.5	1693.1	Tree Out of ROW
3309901	6.1.6	1620.1	Weather - Unknown
3309001	6.1.7	1509.4	Tree Out of ROW
3411801	6.1.8	1420.9	Weather - Unknown
3007904	6.1.9	1230.6	Tree Out of ROW
3303903	6.1.10	1225.6	Tree Out of ROW

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
3310501	6.2.1	9.615	Tree Out of ROW
3411801	6.2.2	8.944	Equipment Failure
3413402	6.2.3	7.827	Weather - Lightning
3411802	6.2.4	7.482	Equipment Failure
3311103	6.2.5	7.312	Vandalism
3307302	6.2.8	6.827	Tree Out of ROW
3202202	6.2.6	6.686	Equipment Failure
3201001	6.2.7	6.643	Scheduled - Company
3000601	6.2.9	6.533	Scheduled - Company
3404002	6.2.10	6.300	Tree Out of ROW

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

See attachments:
- VM Plan Update - April 1, 2009
- 2008 VM Plan Summary
- 2009 VM Plan Summary

SECTION 8: UTILITY COMMENTS

System Reliability results for each of the past 5 years is attached separately:
- System Reliability Summary - Kentucky Power - 2009

Worst Performing Circuit (WPC) analysis and plans are attached separately:
- KPCo WPC Analysis and Plans - Ashland District for 2008
- KPCo WPC Analysis and Plans - Hazard District for 2008
- KPCo WPC Analysis and Plans - Pikeville District for 2008

Kentucky Power Company

Vegetation Management Plan Update

April 1, 2009

Kentucky Power Company manages vegetation along approximately 9,700 miles of distribution line within its service territory. Kentucky Power's distribution Vegetation Management Plan (VM Plan) integrates a blend of work methods to achieve long-term goals and address short-term corrective maintenance. The following activities are included in Kentucky Power's VM Plan: (1) tree pruning and removal, (2) manual, mechanical and chemical control of vegetation along right-of-ways, (3) pre and post inspections of required work, (4) tree replacement program, (5) public education, and (6) tree inventories, work management system and computerized functions.

The VM Plan is developed by Kentucky Power Forestry personnel by evaluating circuit reliability performance, maintenance histories, field analysis of Right-Of-Way (ROW) conditions, customer feedback, and input from field personnel. Local operations and engineering personnel are also consulted for their knowledge of circuit design, field observations, circuit performance, and local community issues. The VM Plan is intended to be flexible and can be modified throughout the year to adapt to changing environmental conditions and any developing vegetation-related reliability issues.

The 2008 Kentucky Power distribution VM Plan was implemented as planned without any major changes. However in 2008, the Eastern Kentucky weather patterns returned to more normal conditions following very dry and calm conditions in 2007. This resulted in increased tree growth rates for the year. We also experienced a great increase in the number of wind storms. With the increase in the vegetation volume and an increased amount of time devoted to service restoration activities, we did not achieve our targets for miles of line maintained and for total expenditures for the year. Maintenance was performed on 1,393 miles of line which was 80.4% of the goal. Our total expenditures for the 2008 program were 95.9% of the budgeted amount.

For 2009, there are no major changes in the activities and processes utilized in Kentucky Power's distribution VM Plan, which calls for maintaining 1,229 miles of line at a total expenditure of $9,676,000.

(See attached summary tables for 2008 and 2009 numbers.)

2008 KENTUCKY POWER VEGETATION MANAGEMENT PLAN SUMMARY

AREA	PLANNED CUT MILES	ACTUAL CUT MILES	PLANNED AERIAL SAW MILES	ACTUAL AERIAL SAW MILES	PLANNED SPRAY MILES	ACTUAL SPRAY MILES	PLANNED SPRAY ACRES	ACTUAL SPRAY ACRES
HAZARD	273	437	27	16	339	339	1115	1115
PIKEVILLE	413	204	27	7	253	125	625	779
ASHLAND	311	126	15	31	75	108	241	326
TOTALS	997	767	69	54	667	572	1981	2220

AREA	FORESTRY CAPITAL FUNDING	FORESTRY CAPITAL EXPENDITURES	UNSCHEDULED REACTIVE O&M FUNDING	UNSCHEDULED REACTIVE O&M EXPENDITURES	SCHEDULED O&M FUNDING	SCHEDULED O&M EXPENDITURES	TOTAL O&M FUNDING	TOTAL O&M EXPENDITURES
HAZARD	$ 907,225		$ 221,500	$ 165,921	$ 2,292,625		$ 2,514,125	
PIKEVILLE	$ 979,093		$ 426,975	$ 152,384	$ 2,533,630		$ 2,960,605	
ASHLAND	$ 794,117		$ 150,000	$ 293,076	$ 1,970,606		$ 2,120,606	
TOTALS	$ 2,680,435	$ 2,618,698	$ 798,475	$ 611,381	$ 6,796,861	$ 6,620,518	$ 7,595,336	$ 7,231,899

2009 KENTUCKY POWER DISTRIBUTION VEGETATION MANAGEMENT PLAN

AREA	PLANNED MILES	PLANNED SPRAY ACRES	UNSCHEDULED REACTIVE O&M FUNDING	SCHEDULED O&M FUNDING	TOTAL O&M FUNDING	FORESTRY CAPITAL FUNDING	TOTAL VMP FUNDING
HAZARD	484	863	$ 191,947	$ 2,139,834	$ 2,331,781	$ 891,407	$ 3,223,188
PIKEVILLE	408	621	$ 320,400	$ 2,327,192	$ 2,647,592	$ 1,012,136	$ 3,659,728
ASHLAND	337	493	$ 150,000	$ 1,870,627	$ 2,020,627	$ 772,457	$ 2,793,084
TOTALS	1229	1977	$ 662,347	$ 6,337,653	$ 7,000,000	$ 2,676,000	$ 9,676,000

Kentucky Power Company
5-Year System Performance

(Excluding Major Events as defined by IEEE Std 1366)

Calendar Year	SAIFI	CAIDI	SAIDI
2004	2.545	204.5	520.5
2005	2.574	159.5	410.4
2006	2.756	182.2	502.1
2007	2.276	146.9	334.2
2008	2.904	170.9	496.3

Kentucky Power Company

2008 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Ashland District

Grahn Station – Pleasant Valley 12kV Circuit (3000601 – SAIDI # 3, SAIFI # 8)

About 60% of the Customers Interrupted (SAIFI) and Customer Minutes Interrupted (SAIDI) can be accounted for by Transmission - Vandalism and Transmission – Scheduled outages. On February 2, 2008 a vandal shot an insulator and conductor down on the 69 kV feeding the station. Crews went to open the 69 kV switch just outside of Grahn Station and found the switch to be defective. In order to get customers back on, loops were cut and customers were restored. The following weekend customers were outaged for the second time to make up loops. On June 14, 2008, loops were cut once again so the switch could be isolated. A new pole and switch were installed. The fourth outage was on July 11 to make up loops on the newly installed switch and pole.

No further action is required.

Busseyville Station – Torchlight 34.5kV Circuit (3007904 – SAIDI # 9)

Over 75% of the total Customer Minutes Interrupted were due to Tree Out of ROW and Vehicle Accident (Non-AEP). On August 11, 2008 a truck with its bed raised traveling along US 23 caught a telephone cable and broke 4 or 5 poles. This one episode caused approximately 35% of the total CMI for the entire year. Another 40% of the total Customer Minutes Interrupted was due to numerous Tree Out of ROW outages. Several areas have been targeted and dead pines have been removed over the past year. Along SR 581, eight to ten spans are in the process of being relocated to avoid further tree related issues. We will continue to review outage data and act accordingly.

Kentucky Power Company

2008 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Hazard District

Haddix Station – Quicksand 34.5kV Circuit (3310501 – SAIFI #1, SAIDI #4)

This circuit has been at or near the top of our worst performing circuit list for several years. Last year's list had this circuit ranked at SAIFI#9 and SAIDI #10, so in spite of continued efforts to improve the reliability performance, the Haddix Quicksand Circuit indices worsened.

SAIFI 2007 vs. 2008 was 5.488 and 9.615 respectively and SAIDI 2007 vs. 2008 was 842.9 and 2016.4 respectively. Total customer minutes of interruptions (CMI) for 2007 vs. 2008 were 1,884,737 and 4,504,694 respectively.

Causes

The top four outage causes that contributed to 92% of the total CMI for 2008 were:

Tree out of ROW = 1,812,937 minutes (40.2% of total CMI)
Equipment Failure = 1,417,590 minutes (31.5% of total CMI)
Tree in ROW = 596,333 minutes (13.2% of total CMI)
Scheduled = 317,051 minutes (7.0% of total CMI)

Because of the size of this circuit (240 line miles – note this was reported as 259 miles in last year's report) and the number of customers served (over 2220) any outage on the feeder breaker of the first zone reclosers will result in a high number of customer minutes of interruption. In fact, during 2008, there were eight outages out of a total of 160 outages that accounted for 63% of the total CMI for the circuit.

These eight outages involved either the feeder breaker or first zone reclosers which affected a large number of customers and also had long durations which directly contributed to the increase in SAIFI and SAIDI. The details of these outages are below:

Date	Cause	Isolating Device	Total Duration (min)	Customers Affected	Total CMI
1/8/2008	Scheduled	Recloser	207	1032	213,624
1/29/2008	Tree in ROW	Feeder	239	2236	534,404
2/6/2008	Tree out ROW	Feeder	316	2236	365,683
6/3/2008	Tree out ROW	Recloser	472	727	266,671
7/9/2008	Tree out ROW	Recloser	660	569	360,381
7/27/2008	Equip (pole)	Recloser	539	1122	524,287
11/4/2008	Equip (pole)	Recloser	505	567	214,824
12/26/2008	Equip (insul)	Feeder	141	2220	313,020

Corrective Actions

After the feeder breaker outages in January and February, the breaker zone right of way was inspected and the width of the right of way was expanded. Also, a pine thicket that was responsible for the Tree in ROW outage was cleared. All circuit breaker zones have been worked to have the rights of way widened in selected areas. This program has been expanded in 2009 to begin similar work in downstream recloser zones that have large numbers of customers.

A detailed pole-by-pole inspection was completed in 2007 and the outage on Jan 8, 2008 was scheduled to make multiple simultaneous repairs to the circuit that could not be performed with the lines energized.

The insulator failure that caused the Dec. 26, 2008 outage belonged to a class of old polymer insulators that are experiencing an increasing number of failures. Over 250 insulators of this type were identified in the inspection and there will be outages scheduled in 2009 to replace the insulators along with other equipment.

It is possible in the future that an additional circuit feeder breaker and exit circuit be constructed so that the Haddix Quicksand Circuit could be divided into two circuits. That way, a feeder outage would affect fewer customers. This will depend on capital funding and priorities.

The concentrated cutout replacement program appears to have been a success, with only 12 cutout related outages that accounted for just 76,043 customer minutes of interruption. Of course, this is dependent on where the failure occurs on the circuit. The replacement program targeted the breaker zone and then the larger recloser protection zones.

Bulan Station – Ajax Dwarf 12kV Circuit (3307302 – SAIDI # 2, SAIFI # 5)

This circuit was not on either the SAIFI or SAIDI list in 2007. The predominant outage causes for this circuit were Tree out of ROW and Weather - High Winds, which accounted for 48.5% and 39% of the total CMI respectively for the circuit during the year. There were a total of 69 sustained outages on the circuit for the year with 28 for Tree out of ROW and only one for Weather - High Winds.

The Bulan Ajax Dwarf Circuit is composed of three main branches that split near the Bulan Station. One branch feeds towards Lost Creek, one branch feeds towards Dwarf and the other branch feeds towards Ajax. Each of these branches is protected by reclosers. The reason for the high SAIFI and SAIDI is that many of the Tree out of ROW outages affected either the feeder breaker or the reclosers protecting these main branches. The one Weather High Winds outage initially affected the feeder breaker.

These outages affected many customers and had long restoration times due to the significant damage caused by the fallen trees which typically break crossarms and poles. The one Weather High Winds outage damage included two broken poles at a mountain top to mountain top highway crossing. Bulldozers were used to access the work site and the poles had to be set manually. This one outage which affected the Lost Creek branch lasted over 44 hours. Many of the long outages caused by trees also affected the Lost Creek branch.

One Tree in ROW outage event on 7/11/2008 accounted for 69.3% of the total CMI for all Tree in ROW outages for the entire circuit. This was a very large pine tree that leaned into the conductors. The property owner would only allow the tree to be trimmed.

Below is a table summarizing the top ten outages on the circuit based on total CMI:

Date	Cause	Isolating Device	Total Duration (min)	Customers Affected	Total CMI
4/11/2008	High Winds	Feeder	2,661	1108	986,463
5/11/2008	Tree Out ROW	Recloser	783	340	248,000
8/27/2008	Tree Out ROW	Feeder	749	1103	216,685
12/10/2008	Tree Out ROW	Recloser	540	345	175,947
12/14/2008	Tree Out ROW	Recloser	457	434	161,486
7/11/2008	Tree In ROW	Recloser	954	358	133,284
6/16/2008	Tree Out ROW	Recloser	429	226	96,954
1/29/2008	Tree Out ROW	Recloser	428	208	89,024
1/30/2008	Tree Out ROW	Switch	644	88	56,672
12/14/2008	Tree Out ROW	Recloser	486	114	55,404

Corrective Actions

The Dwarf branch of the circuit has a circuit tie with the Beckham Hindman 34.5kV Circuit that can be used for partial restoration during outages via a large step-down transformer bank. The Lost Creek and Ajax branches are radial feeds with no circuit ties.

There is a project in progress to provide an alternate feed for the Lost Creek branch of the circuit. The Shamrock Shamrock 34.5kV Circuit crosses the Bulan Ajax Dwarf Circuit near the end of the Lost Creek branch. A step-down transformer bank with reclosers and voltage regulators has been installed to add a 12kV source. The part of the circuit that was involved in the Weather High Wind outage has been relocated to a lower elevation which makes the conductor more accessible and minimizes exposure to higher elevation winds.

In 2009, Vegetation Management has begun ROW reclearing along the Lost Creek and Dwarf branches of the circuit. Additional widening of the existing ROW will be performed in select locations, especially patches of pine trees, in an attempt to reduce the number of tree outages.

Also, relay recalibration will be performed to prevent feeder breaker lock outs for sustained faults beyond the main circuit branch reclosers.

Beckham Station – Hindman 34.5kV Circuit (3308401 – SAIFI # 10)

The Beckham Hindman Circuit is a large circuit with over 180 primary line miles and it serves almost 3500 customers. In the Hazard District, the Beckham Hindman Circuit ranks #1 for customers served and ranks second only to the Haddix Quicksand Circuit in primary line miles.

Because of the circuit's size and number of customers served, any outage involving the circuit feeder breaker or first zone reclosers will affect a large number of customers. The total CMI for this circuit in 2008 was 3,530,073. The three outages causes that contributed most to the total CMI were: Tree out of ROW, Equipment Failure and Scheduled with 1,670,258; 1,382,205; and 212,965 CMI respectively.

There were two outages that involved the feeder breaker. On 1/29/2008, a tree fell from outside the ROW and stripped the conductors from a three phase pole in the breaker zone. Even with partial restoration, this outage lasted for 12 hours and generated 1,175,406 CMI. This one outage accounted for 33.3% of the total CMI for this circuit in 2008. On 12/14/2008, a cutout failed in the breaker zone which resulted in an outage that lasted almost eight hours and generated 796,473 CMI. These two outages accounted for 55.1% of the total CMI for the circuit and a circuit SAIFI of 2.

Below is a table summarizing the top ten outages on the circuit based on total CMI:

Date	Cause	Isolating Device	Total Duration (min)	Customers Affected	Total CMI
1/29/2008	Tree Out of ROW	Feeder	721	3,493	1,175,406
12/14/2008	Equip (Cutout)	Feeder	465	3,487	796,473
3/7/2008	Equip (crossarm)	Recloser	306	1,180	219,561
6/28/2008	Tree Out of ROW	Recloser	276	520	143,520
12/19/2008	Equip (crossarm)	Recloser	176	1183	99,203
11/13/2008	Tree Out of ROW	Recloser	123	583	71,709
12/3/2008	Scheduled	Recloser	496	417	64,474
3/18/2008	Scheduled	Recloser	126	415	52,290
4/8/2008	Scheduled	Recloser	119	415	49,385
6/1/2008	Equip (crossarm)	Recloser	429	292	46,428

Corrective Actions

A large capital improvement project was begun in 2008 to establish the new Soft Shell 138/34.5kV Station. The purpose of this project was to relieve loading on the Beckham Station Transformer and the Beckham Hindman Circuit. Soft Shell Station was placed in service in late Dec. 2008. Over 1000 customers were transferred from the Beckham Hindman Circuit to the Soft Shell Leburn Circuit and over 500 customers were transferred to the Soft Shell Vest Circuit. These customers were transferred along with the associated primary circuits.

With these new circuits in service, the large Beckham Hindman Circuit has been divided into three circuits. Also, the new circuit ties will provide additional opportunities for partial restorations during outages. The smaller circuits should reduce SAIFI and the additional restoration capabilities should reduce CMI which would reduce SAIDI.

The feeder breaker zone will be reviewed by Vegetation Management to determine if there are any opportunities to expand the existing circuit ROW to attempt to reduce Tree out of ROW outages. Because this circuit has been one of the past worst performers, the existing ROW has been a focus of Vegetation Management. Tree in ROW outages contributed only 98,673 CMI or only 2.8% of the total CMI for the circuit in 2008.

The circuit three phase back bone will also be inspected in an attempt to identify any additional crossarms that may fail. The amount of scheduled outages in 2009 will be reduced because all the scheduled outages listed in the table above were required for construction of exit circuits associated with the new Soft Shell Station.

Collier Station – Smoot Creek 34.5kV Circuit (3308603 – SAIDI # 5)

The major outage categories for this circuit are Tree out of ROW, Vehicle Accidents and Equipment Failure with all three of these causes accounting for 92.4% of the total CMI for 2008. Within these three categories, there were five individual outages out of a total of seventy sustained outages that accounted for 82.5% of the total CMI for 2008.

These outages lasted from five hours to almost ten hours because of the extensive damages to the distribution facilities. The Tree out of R/W outages (two total) broke crossarms and poles and the Vehicle Accidents (two total) also included broken poles. The Equipment Failure (one outage) was due to a failure in the load tap changer of the main station power transformer and extensive distribution switching was required to restore service from other distribution sources.

The Collier Smoot Creek Circuit is a radial circuit with little opportunity for partial restoration from other circuits. Below is a table that summarizes each of the five outages:

Date	Cause	Isolating Device	Total Duration (min)	Customers Affected	Total CMI
2/19/2008	Vehicle	Recloser	337	663	211,146
4/12/2008	Tree out ROW	Recloser	587	369	154,139
5/5/2008	Vehicle	Recloser	381	685	260,985
7/31/2008	Tree out ROW	Recloser	485	672	312,920
8/4/2008	Equipment	Station	473	996	435,299

Corrective Actions

The station transformer failure was an unusual event and typically these do result in a long outage. Large coal mining operations curtailed their loads so that the residential customers could be restored from other sources until a mobile transformer was installed. This one outage accounted for 26.1% of the CMI for the year. The response would be similar should a transformer failure occur in the future. The station is equipped with structures in place to facilitate a mobile transformer installation.

To address Tree out of ROW outages, the company has expanded existing ROW where feasible, initially focusing on the feeder breaker zone. In 2009, we plan to address the ROW in the first recloser zones that feed large numbers of customers.

The 2/19/2008 outage was caused by a coal truck that ran off the highway striking and breaking a 60 foot main line pole with a three phase tap and a single phase tap. This outage took a long time to repair.

The 5/5/2008 outage was caused by an excavator that was installing a gas line. The excavator pushed a tree onto a three phase line on a hill side that was inaccessible to construction equipment, which resulted in another long outage.

These types of outages that occurred on the Collier Smoot Creek Circuit are difficult to predict. If not for the above five outages, this circuit would have experienced good reliability during the year.

Slemp Station – Defeated Creek 34.5kV Circuit (3309901 – SAIDI # 6)

The reason this circuit made the top ten worst performing circuits for SAIDI was one long outage that occurred on 5/11/2008. A storm with high winds hit the Hazard and Whitesburg Areas that day resulting in many outages. This circuit serves only 38 customer.

The majority of the main feeder consists of about 10 miles of subtransmission line that has been converted to distribution. Much of this line is inaccessible to normal vehicles and must be patrolled by ATV or helicopter. The circuit was patrolled in the afternoon and evening of 5/11/2008, but patrolling was halted due to darkness. The patrol resumed early the next morning and no damage was found and the circuit was restored to service.

This resulted in an outage of nearly 27 hours with 55,941 CMI. The 2008 SAIFI for this circuit including this outage was 2.086. Excluding the 5/11/2008 outage, the SAIFI and SAIDI for this circuit would be reduced to 1.087 and 21.8 respectively which would be superlative reliability performance.

Corrective Actions

The access roads and trails will be mapped so that 4WD and ATV patrols can be expedited. Depending on weather, a helicopter patrol is always an option. In fact, a helicopter patrol was to be arranged on 5/12/2008 if the circuit restoration attempt had been unsuccessful.

Jeff Station – Viper 12kV Circuit (3309001 – SAIDI # 7)

The primary cause for the poor performance of this circuit was one feeder breaker outage on 3/19/2008 caused by a large tree falling from outside the ROW which stripped the primary conductors off of four poles. These poles were located on a steep hillside that was inaccessible to bucket trucks which required all the restoration work to be performed manually. The Jeff Viper Circuit is a radial circuit and the damage was close to the station so that all customers remained out for over 13.5 hours.

Although this outage was classified as Tree out of ROW, this was related to highway construction work that is underway near the feeder circuit. Excavation work near the tree caused it to uproot and fall. Another feeder breaker outage on 6/13/2008 was also related to the highway construction work. A blast was set off near the lines that caused the conductors to wrap together which caused two phase conductors to burn down. That resulted in a 96 minute outage for the entire circuit.

The 2008 SAIFI and SAIDI for this circuit were 5.069 and 1509.36 respectively. With the two feeder outages excluded, the SAIFI and SAIDI would have been 3.058 and 589.6 respectively.

Corrective Actions

After the 3/19/2008 outage, the ROW near the line was inspected and additional trees that could fall into the conductors were removed. Also, the highway construction has progressed to a point that further excavation and blasting will be unlikely to affect the circuit.

Leslie Station – Hals Fork 34.5kV Circuit (3303903 – SAIDI # 10)

This circuit is a fairly large circuit with 74 primary circuit miles that serves over 1100 customers. Within the first few miles from Leslie Station, there are some normally open circuit ties with the Leslie Hyden 34.5kV Circuit; however, once the circuit passes through the City of Hyden, the circuit is entirely radial past the first circuit recloser.

The three major outage categories for this circuit were Tree out of ROW, Equipment Failure and Scheduled. In 2008, this circuit had a total of 60 outages that generated a total of 1,366,509 CMI. There were 12 Tree out of ROW outages that accounted for 631,240 CMI or 46.2% or the circuit total CMI. There were 10 Equipment Failure outages that accounted for 332,621 CMI or 24.3% of the circuit total CMI. There were 10 Scheduled outages that accounted for 249,180 CMI or 18.2% of the circuit total CMI.

On 5/20/2008 a large tree fell from outside the ROW onto the line and knocked down four spans of three phase line. This initially interrupted 776 customers of which 163 were restored after 217 minutes. The remaining 613 customers were restored after repairs were completed about six hours later. This one outage generated 380,490 CMI or 27.8% of the total CMI for the circuit.

The long outage on 1/24/2008 was caused when a 500kVA step-down transformer failed during single digit temperatures. The transformer was replaced which also failed due to load. Two 500kVA transformers connected in parallel were required to pick up the load.

The long outages on 6/26/2008 and 1/29/2008 both occurred late at night in remote mountainous terrain. Crews worked through the night to restore service.

Below is a table that shows the largest outages for the circuit during 2008 based on total CMI. These outages account for 86.2% of the total CMI and 70.4% of the annual SAIFI:

Date	Cause	Isolating Device	Total Duration (min)	Customers Affected	Total CMI
5/20/2008	Tree Out of ROW	Recloser	563	776	380,490
6/4/2008	Scheduled	Recloser	308	615	189,420
1/24/2008	Equip (Step-down)	Fuse	980	161	147,604
12/16/2008	Tree Out of ROW	Recloser	312	388	121,056
4/28/2008	Equip (crossarm)	Recloser	154	778	106,562
6/26/2008	Tree Out of ROW	Fuse	885	133	99,885
4/16/2008	Scheduled	Recloser	61	785	47,885
5/9/2008	Equip (cutout)	Recloser	156	603	42,594
1/29/2008	Tree In ROW	Recloser	617	69	42,573

Corrective Actions

The Leslie Hals Fork Circuit has been on the Hazard District worst performing circuit in the past. As such, a detailed inspection was conducted and circuit performance was analyzed to develop a multi-year plan to improve the circuit reliability.

The entire circuit ROW, including side taps was recleared. This effort has been a success because there were only 13 outages caused by Tree in ROW during the year which accounted for only 93,484 CMI or only 6.8% of the total CMI for the circuit.

The main feeder extending from the first circuit recloser was old #4 CU conductor on old poles and crossarms that had reached the end of their operational life. A capital improvement project was funded to completely rebuild several miles of this line with new #4/0AA conductor, poles and crossarms.

Both of the scheduled outages in the table above were required to transfer conductors during construction for the new lines.

The existing ROW was widened in selected areas as part of the capital improvement project as an attempt to minimize outages caused by trees falling into the lines from outside the ROW.

Kentucky Power Company

2008 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Pikeville District

Johns Creek Station – Meta 34.5kV Circuit (3411801 – SAIFI # 2, SAIDI # 8)

Trees inside ROW caused 34% of the outages during 2008 for this circuit. Right of Way was checked and hotspot reclearing done in the 3rd zone during 2007. Additional ROW work has been planned for 2009 in two zones affecting 500 customers or more. Another 21% of the total outages are due to equipment failure. Fuse cutout failures and transformer failures account for half of these cases. This circuit will be investigated using the ICOM noise detection equipment and infrared/thermal imaging to try to pinpoint possible hardware problems through the second protection zone of the circuit. This circuit was targeted in recent years for cutout replacement and many have already been done. Two outages happened while Transmission had a mobile transformer in service inside the station during work to pinpoint a possible relay problem. That problem was corrected and the mobile transformer taken out of service. These two outages also affected the Raccoon circuit of Johns Creek Station.

Johns Creek Station-Raccoon 34.5kV Circuit (3411802 – SAIFI # 4)

Trees inside and outside ROW caused the majority of outages on this circuit (36% of the total). ROW within protection zones affecting 500 or more customers will be worked in 2009 to eliminate danger trees. This work will cover all of the circuit's main line. Equipment failure was next with 24% of the total. These included fuse cutouts, transformers and arrestors. This circuit will also be checked with the ICOM equipment to locate possible hardware problems. Action on this circuit has also included reclearing and hotspot work by the Forestry group over the past several years.

Lovely Station – Wolf Creek 34.5kV Circuit (3202202 – SAIFI # 6)

Trees inside and outside of ROW comprised 34% of the outages for this circuit. We have made use of scheduled outages on this circuit in 2008 to clear danger trees from the mainline. Ground spray was done on parts of this circuit in 2008. Equipment failure in the form of fuse cutout failures account for 12% of the outages. Insulators and transformers make up another 8% of the total. During 2009, this circuit will also be patrolled with the ICOM equipment to locate possible hardware failure sites. A fuse cutout replacement program will be started during 2009 on this circuit. A tie-line between this circuit and the Dewey-Inez circuit will be proposed as a way to reduce outage time for customers when an outage does happen. Initially this tie will be manually operated but later it could be incorporated into the Dewey-Inez automation system.

Garrett Station – Lackey 12kV Circuit (3413402 – SAIFI # 3)

Trees out of ROW make up 30% of the total outages here. This circuit was cleared in the past 3 years and hotspot work continues as needed. Equipment failure is the cause for 24% of the outages with almost half of that due to fuse cutout failures. This is another circuit that is a candidate for investigation with the noise detection equipment to look for future hardware failure locations. We do have work planned for fuse cutout replacement of known problem cutouts on this circuit for 2009. Weather, including two Transmission system outages due to lightning, made up 16 % of the outage causes. These same two outages affected Spring Fork Station.

Spring Fork Station – One Phase 12kV Circuit (3404002 – SAIDI # 1, SAIFI # 9)

Trees out of right of way and lightning were major causes for this circuit in 2008. This area was patrolled in 2008 to look for danger trees, hotspots, and defective hardware. The problem areas that were found were corrected on scheduled outages during the year and accounted for 14% of the 2008 total number. Another 14% of the total comes from aerial saw reclearing when the helicopter struck the primary conductor causing an outage. The small number of customers and remote location make if difficult to work when it comes to outages. It takes a servicer at least one hour of travel to get to it when there is an outage. If a crew is required to make repairs then additional outage time occurs as the crew is dispatched and travels to the site. This lengthens the outage duration for these customers.

Tom Watkins Station – Distribution 12kV Circuit (3201001 – SAIFI # 7)

This circuit was recleared in 2007-2008. Trees out of ROW make up 15% of the total number of outages. We have installed an additional recloser to reduce the station breaker zone exposure. Each major branch of this circuit now has its own protective device. Equipment failure makes up 30% of the total. Items within that category include fuse cutout failure, transformer, lightning arrestor and connector failure. This circuit will also be patrolled in 2009 with the noise detection equipment to look for hardware failure possibilities. Scheduled outages including 2 due to vandalism/copper theft within this station make up another 18% of all outages.

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HAND DELIVERED

Reggie Chaney
Director of Engineering
Public Service Commission of Kentucky
211 Sower Boulevard
Frankfort, Kentucky 40601

RE: Kentucky Power Company – Electric Distribution Utility Annual Reliability Report

Dear Mr. Chaney:

Enclosed please find Kentucky Power Company's filing in response to the Commission's October 26, 2006 Order in Case No. 2006-00494.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Mark R. Overstreet

cc: E.K. Wagner

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Kentucky Power Company
REPORT PREPARED BY	1.2	Everett G. Phillips
E-MAIL ADDRESS OF PREPARER	1.3	egphillips@aep.com
PHONE NUMBER OF PREPARER	1.4	606-929-1463

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2009

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	24.298
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1/1/2004
LAST DATE USED TO DETERMINE T_{MED}	3.3	12/31/2008
NUMBER OF MED IN REPORT YEAR	3.4	11 days

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	497.1
SAIFI	4.2	2.556
CAIDI	4.3	194.5

Including MED (Optional)

SAIDI	4.4	4065.2
SAIFI	4.5	4.079
CAIDI	4.6	996.6

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Veg Outside R/W	5.1.1	174.8	Veg Outside R/W	5.2.1	0.575
Veg Inside R/W	5.1.2	89.2	Equipment Failure	5.2.2	0.558
Equipment Failure	5.1.3	83.7	Veg Inside R/W	5.2.3	0.347
Scheduled	5.1.4	33.9	Scheduled	5.2.4	0.311
Transmission	5.1.5	19.2	Transmission	5.2.5	0.168
Weather - Ice	5.1.6	16.3	Station - Distribution	5.2.6	0.109
Vehicle Accident	5.1.7	11.5	Vehicle Accident	5.2.7	0.084
Unknown (Non-Weather)	5.1.8	10.8	Unknown (Non-Weather)	5.2.8	0.077
Flood/Slide	5.1.9	9.0	Tree Removal (Non-AEP)	5.2.9	0.056
Station - Distribution	5.1.10	8.7	Overload	5.2.10	0.044

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
3311101	6.1.1	3373.5	Tree Out of ROW
3309902	6.1.2	2048.9	Tree Out of ROW
3309901	6.1.3	1656.4	Weather - Flood/Slide
3310501	6.1.4	1620.8	Tree Out of ROW
3200202	6.1.5	1550.1	Tree Out of ROW
3307301	6.1.6	1518.6	Tree Out of ROW
3311102	6.1.7	1518.6	Tree Out of ROW
3404002	6.1.8	1473.5	Equipment Failure
3301701	6.1.9	1459.5	Tree Out of ROW
3301101	6.1.10	1430.3	Tree Out of ROW

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
3311101	6.2.1	8.999	Tree Out of ROW
3309902	6.2.2	7.694	Tree Out of ROW
2150103	6.2.3	7.122	Scheduled - Company
3000201	6.2.4	6.891	Overload
3307301	6.2.5	6.461	Tree Out of ROW
3301402	6.2.6	6.450	Tree Out of ROW
3310501	6.2.7	6.313	Tree Out of ROW
3302701	6.2.8	6.108	Tree Inside ROW
3308603	6.2.9	5.851	Tree Inside ROW
3301701	6.2.10	5.556	Equipment Failure

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

See attachments:
- 2010 Kentucky Power Vegetation Management Plan.doc
- 2009 VM Plan Recap.xls

NOTE: Due to the historic level of storm activity in 2009, and especially the December snow storm, Kentucky Power was unable to spend all of the funds designated for Vegetation Management during 2009.

SECTION 8: UTILITY COMMENTS

In 2009, Kentucky Power experienced an unusually high number of JMED's (11), which caused the System Reliability Results with no exclusions to rise dramatically compared to previous years.

System Reliability Results for each of the past 5 years is attached separately:
- System Reliability 5-Year Summary - Kentucky Power - 2009.xls

Worst Performing Circuit (WPC) analysis and plans are attached separately:
KPCo WPC Analysis and Plans - Ashland District for Calendar Year 2009.doc
KPCo WPC Analysis and Plans - Hazard District for Calendar Year 2009.doc
KPCo WPC Analysis and Plans - Pikeville District for Calendar Year 2009.doc

2010 Kentucky Power Vegetation Management Plan/Review

There are no major changes to the Vegetation Management Plan for 2010. The Cut portion of the 2010 VMP will focus on Feeder Breaker Zones and Recloser/Sectionalizer Zones that impact large numbers of customers. Mitigating tree-caused outages in these areas will provide the optimum impact on reducing SAIFI. These zones will be prioritized and scheduled based on past reliability performance, field inspection of the right-of-way conditions, and the number of customers impacted. Some line segments that have experienced repeated tree-caused outages in 2009 will be included in the 2010 Plan also. Some full-circuit reclearing will also be performed. These circuits will be selected based on tree-related outage performance. Approximately $571,175 will be earmarked in the Cut portion of the VM Plan to address reactive reliability issues that develop throughout the year. This Unscheduled/Reactive funding represents about eight percent of the total VM Budget.

Right-of-Way (ROW) widening will be performed on selected line segments to reduce the potential for outages caused by trees from outside the ROW. These lines segments are typically in inaccessible areas, have experienced excessive Tree Out of ROW outages, and/or serve critical or large numbers of customers. This work will be funded under the Capital portion of the VM Plan.

Herbicide treatment methods are an important component of Kentucky Power's Vegetation Management Plan. ULV (Ultra Low Volume), high-volume foliar, basal, cut-surface, and aerial application techniques will be utilized depending on the brush conditions. The goal is to treat 1,804 acres of brush in 2010.

2010 KENTUCKY POWER DISTRIBUTION VEGETATION MANAGEMENT PLAN

AREA	PLANNED MILES	PLANNED SPRAY ACRES	FORESTRY CAPITAL FUNDING	UNSCHEDULED REACTIVE O&M FUNDING	SCHEDULED O&M FUNDING	TOTAL O&M FUNDING	TOTAL VMP FUNDING
HAZARD	333	854	$348,319	$197,579	$2,032,949	$ 2,230,528	$2,578,847
PIKEVILLE	360	630	$378,310	$273,132	$2,222,821	$ 2,495,953	$2,874,263
ASHLAND	179	320	$273,371	$100,464	$1,673,055	$ 1,773,519	$2,046,890
TOTALS	872	1804	$1,000,000	$571,175	$5,928,825	$ 6,500,000	$7,500,000

The 2009 VM Plan was implemented without any major changes. The Ice Storm in January, the February Wind Storm in the Hazard Area and the widespread Snow Storm in December caused significant damage to our distribution system. Tree crews worked for several weeks following these major events to remove damaged trees and limbs endangering our facilities. A series of minor storms in June initiated additional reactive tree work that also impacted our VM Plan. The historic level of storm activity experienced in 2009 prevented us from spending all of the funds designated for Vegetation Management during 2009. We also performed more Right-of-Way widening work than was originally planned. This work was funded under the Capital portion of the budget. Right-of-Way widening is aimed at improving the long-term reliability of line segments by reducing the number of outages caused by trees falling from outside of the Right-of-Way.

2009 KENTUCKY POWER DISTRIBUTION VEGETATION MANAGEMENT RECAP

AREA	PLANNED MILES	ACTUAL MILES	PLANNED SPRAY ACRES	ACTUAL SPRAY ACRES	FORESTRY CAPITAL FUNDING	FORESTRY CAPITAL EXPENDITURES	UNSCHEDULED REACTIVE O&M FUNDING	UNSCHEDULED REACTIVE O&M EXPENDITURES
HAZARD	484	668	863	1092	$ 891,407	$ 734,979	$ 191,947	$ 215,338
PIKEVILLE	408	168	621	615	$ 1,012,136	$ 1,303,778	$ 320,400	$ 317,995
ASHLAND	337	119	493	279	$ 772,457	$ 873,702	$ 150,000	$ 173,839
TOTALS	1229	955	1977	1986	$ 2,676,000	$ 2,912,459	$ 662,347	$ 707,172

AREA	SCHEDULED O&M FUNDING	SCHEDULED O&M EXPENDITURES	TOTAL O&M FUNDING	TOTAL O&M EXPENDITURES	TOTAL VMP FUNDING	TOTAL VMP EXPENDITURES
HAZARD	$ 2,139,834	$ 1,943,300	$ 2,331,781	$ 2,158,638	$ 3,223,188	$ 2,893,617
PIKEVILLE	$ 2,327,192	$ 2,258,520	$ 2,647,592	$ 2,576,515	$ 3,659,728	$ 3,880,293
ASHLAND	$ 1,870,627	$ 1,665,818	$ 2,020,627	$ 1,839,657	$ 2,793,084	$ 2,713,359
TOTALS	$ 6,337,653	$ 5,867,638	$ 7,000,000	$ 6,574,810	$ 9,676,000	$ 9,487,269

NOTE: Due to the historic level of storm activity in 2009, and especially the December snow storm, Kentucky Power was unable to spend all of the funds designated for Vegetation Management during 2009.

Kentucky Power Company

5-Year System Performance

(Excluding Major Events as defined by IEEE Std 1366)

Calendar Year	SAIFI	CAIDI	SAIDI
2005	2.574	159.5	410.4
2006	2.756	182.2	502.1
2007	2.276	146.9	334.2
2008	2.904	170.9	496.3
2009	2.556	194.5	497.1

Kentucky Power Company

2009 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Ashland District

Big Sandy Station - Fallsburg South 12kV Circuit (3000201 – SAIFI #4)

This circuit ranked 4th, with a SAIFI of 6.891, on the 2009 SAIFI Worst Performing List primarily due to three cause codes: Overload, Equipment Failure, and Scheduled Company Outage. These three cause codes accounted for 82.2% of the circuit's SAIFI for the year.

Overload – On January 16 and 17, the feeder breaker opened on both days as the B phase conductor sagged into the neutral. Some of the customers on the circuit had multiple outages each day due to cold load pick up problems. These two days accounted for 50.9% of the circuit's total 2009 SAIFI. In December 2009, a project was completed to construct 9.9 kft of three phase 556 Al to help relieve the overloaded 4/0 AA conductor. A different route was taken for the new line, so that possible future considerations could allow for additional construction and the possibility of splitting the circuit. There was no sagging problem during the winter of 2009-2010, after the reconductoring work was completed.

Equipment Failure – Cutout failures were the key contributor to the SAIFI for equipment failures. One outage in the second zone accounted for 45.3% of the equipment failure SAIFI or 7.6% of the total SAIFI. EMI equipment will be used in the future to try to reduce the equipment failures on the circuit.

Scheduled Company – A 9.375 MVA Y-Y station transformer was replaced with a 20 MVA delta-Y station transformer. Due to the phase shift, a 12 minute outage occurred for the installation of a mobile transformer. This accounted for 14.4% of the circuit's total 2009 SAIFI.

Kentucky Power Company

2009 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Hazard District

Stinnett Station – Redbird 34KV Circuit (3311101 – SAIDI # 1, SAIFI # 1)

This circuit wasn't on either the SAIFI or SAIDI worst performer lists in 2007 or 2008. Trees Inside ROW and Trees Out of ROW contributed 63% of the entire customer minutes interrupted (CMI) for 2009. Trees Out of ROW contributed 44% of the total.

Below is a table summarizing the top ten outages on the circuit based on total CMI:

Interruption Start Date	Minor Cause	Clearing Device	Outage Duration	Total Cust Affected	Total Cust Min
06/16/2009	TREE OUT OF ROW	PRI OPEN	1,178	817	962,426
06/18/2009	TREE OUT OF ROW	RECLOSER	1,944	441	438,756
06/16/2009	TREE INSIDE ROW	RECLOSER	1,659	468	390,708
08/12/2009	WEATHER – FLOOD/SLIDE	RECLOSER	754	442	333,268
08/12/2009	WEATHER – FLOOD/SLIDE	RECLOSER	789	740	292,601
10/12/2009	SCHEDULED COMPANY	RECLOSER	352	801	281,952
06/11/2009	TREE INSIDE ROW	RECLOSER	505	817	232,085
04/03/2009	EQUIPMENT FAILURE	FDR BREAKER	154	1,431	220,374
08/22/2009	TREE OUT OF ROW	RECLOSER	931	279	186,061
02/19/2009	TREE OUT OF ROW	RECLOSER	145	834	120,930

The outage on 6/16/2009 involved a tree falling and breaking a pole. This resulted in an outage a little over 19 hours long in which 817 customers were without power. This outage alone contributed 20% of the CMI for 2009 on this circuit.

The reason for the high SAIDI and SAIFI on this circuit is that many of the outages listed in the table above affected either the feeder breaker or the recloser protecting the main branches of the circuit. Many of these outages also caused significant damage whether it was by falling trees or floods which caused extensive damage and took more than normal time to repair.

Corrective Actions

The outage on Oct. 12, 2009 was scheduled in order to replace defective poles that were hard to access. This planned outage was taken to prevent a larger outage in the future if one of the defective poles were to fall causing extensive damage and longer repair time.

The Stinnett Redbird Circuit is in the Hazard District Forestry Plan for 2010. This includes a 13.9 mile reclearing of ROW and a 25 acre ground spray plan. This will include critical regions where there have been several outages due to trees. A large portion of the tree related outages experienced by this circuit will be addressed in this plan but will not prevent all of the tree-related issues.

Slemp Station – Leatherwood 34KV Ckt (3309902 - SAIDI # 2, SAIFI # 2)

Trees Out of ROW, Vehicle Accidents, and Trees Inside ROW contributed 89% of the CMI for the Leatherwood circuit in 2009. The top five outages listed below accounted for 75% of the outages based off of CMI:

Date	Minor Cause	Clearing Device	Outage Duration	Total Cust Affected	Total Customer Min
04/05/2009	TREE OUT OF ROW	Feeder Breaker	840	643	369,472
06/18/2009	TREE OUT OF ROW	Feeder Breaker	524	596	218,653
12/02/2009	VEHICLE ACCIDENT	Feeder Breaker	336	639	149,475
02/19/2009	TREE OUT OF ROW	Feeder Breaker	220	647	142,340
10/17/2009	TREE INSIDE ROW	Feeder Breaker	273	647	103,151

All of the top five outages for this circuit occurred in the feeder breaker zone. Four of these are tree related while one is due to a vehicle accident. The high SAIDI and SAIFI is a result of all these outages occurring in the feeder breaker zone.

On Dec. 2, 2009 there was an outage involving a vehicle accident which broke a pole. The resulting misfortune led to an outage accruing 149,475 CMI.

Corrective Actions

In 2010, the Vegetation Management Plan is to reclear 5.17 miles of ROW on this circuit. This includes the area from the station to the first recloser. This plan will greatly aid in the prevention of some of the outages that have occurred in the feeder breaker zone.

Slemp Leatherwood is a radial circuit with only one tie to the Daisy Leatherwood circuit. The possibility of building a tie-line between Slemp Leatherwood and Leslie Wooten Circuits will be studied. A tie-line to another source would provide the ability to temporarily restore several customers in the event of some outages.

Haddix Station – Quicksand 34KV Ckt (3310501 – SAIDI # 4, SAIFI # 7)

The Haddix Quicksand Circuit has been on the worst performing list for the past several years. In 2008, the Haddix Quicksand circuit ranked # 4 in SAIDI and # 1 in SAIFI. Though several improvements have been undertaken, the circuit remains on the worst performing circuit list for 2009.

The top four outage causes contributed 88% percent of the CMI on this circuit in 2009 and are listed in the chart below:

Minor Cause	Nbr Interruptions	Total Cust Affected	Total Cust Min
TREE OUT OF ROW	59	6,206	1,967,659
SCHEDULED	9	3,003	589,304
WEATHER	3	1,106	375,712
TREE INSIDE ROW	44	951	262,661

The Haddix Quicksand circuit is Hazard's largest circuit by line miles (about 250 miles). This circuit also serves over 2150 customers. Any outage on the feeder breaker or the first zone reclosers will result in a high CMI outage.

The largest single outage accounted for 428,751 of the total CMI. This was scheduled by the company to replace several older polymer insulators. Four of the five largest outages took extra time to repair due to the terrain or the extent of damage from either a tree falling on the line or a rock slide. Four of the top five outages caused either the feeder breaker or the first zone reclosers to lock open.

Corrective Actions

Several older polymer insulators that are experiencing an increasing number of outages are located on this circuit. Several of the outages scheduled during 2009 were to replace these insulators with newer equipment.

It is planned to replace the remainder of the polymer insulators with newer equipment. In 2008, 250 insulators of this type were identified in a pole to pole inspection. Presently, roughly half of these insulators have already been replaced.

Long term planning (will not take effect till several years from now) presently includes construction of an additional circuit feeder breaker and exit circuit to divide the Haddix Quicksand circuit into two different circuits. The implementation of a new exit circuit would drastically reduce the amount of customer minutes interrupted (CMI) resulting from any outages on the Haddix Quicksand breaker. The smaller circuits should also lead to a reduction of SAIFI as fewer customers are affected during individual outages.

Bulan Station – Ary-Heiner 12KV Ckt (3307301 – SAIDI # 6, SAIFI # 5)

The major contributors to outages for this circuit are Tree Out of ROW, Equipment Failure, Overload and, Tree Inside ROW. All of these causes have contributed 85% of the total customer minutes interrupted (CMI) on the circuit during 2009.

An outage occurring on Feb. 28, 2009 accounted for 19% of the total CMI. In this event the pole was burned off at the cross arm. The crew had to wait until the next morning to restore power to the customers due to danger of doing this work in night time conditions.

On Sept. 25, 2009 a tree fell burning down a conductor. This caused a recloser feeding one of the main segments of the circuits to open. Due to repairs needed and the number of customers on the recloser, this one outage accounted for almost 18% of the total CMI for this circuit in 2009.

Minor Cause	Nbr Interruptions	Total Cust Affected	Total Cust Min
TREE OUT OF ROW	8	1,662	372,820
EQUIPMENT FAILURE	16	1,281	294,404
OVERLOAD	2	381	130,943
TREE INSIDE ROW	10	402	110,387
OTHER CAUSES	24	842	165,097

Corrective Actions

A couple of outages experienced by this circuit were caused by or delayed by a recloser that was not operating properly. This recloser was replaced in Feb. 2009.

In 2009, Kentucky Power obtained an improved device to help locate failing equipment by detecting EMI emanating from an arc. Though it will not find all the problems on a circuit this device will aid in locating and preventing some outages. Due to the large number of outages caused by equipment failure on this circuit, the majority of the feeder will be scouted with this device.

Daisy Station – Leatherwood 12 KV Ckt (3301701 – SAIDI # 9, SAIFI #10)

The top three outages causes for the Daisy Leatherwood circuit include Tree Out of ROW, Tree Inside ROW and Equipment Failure, which account for 91% of the total CMI which occurred on this circuit in 2009. (Tree Out of ROW contributed 57% of total CMI.)

The largest single outage accounted for over 28% of the total CMI. A tree out of the ROW fell and caused significant damage to a pole and conductors. Due to the location, the pole had to be manually set. This caused 606 customers to be out of power for over 15 hours.

Corrective Actions

A plan for the Daisy Leatherwood circuit has been drawn up to help improve load balance for the circuit. The plan calls for multi-phasing in several areas as well as upgrading reclosers and fuses to larger sizes. The ROW is to be cleared in the areas requiring multi-phase work. This will also help decrease the CMI due to cold load pick up issues that have occurred in different areas.

Forestry Management also plans to reclear a total of 3.64 line miles of ROW. Of this total, 0.84 miles will be cleared within the first breaker zone while 2.8 miles is planned to be cleared in critical areas where trees have been a problem.

Slemp Station – Defeated Creek 34 KV Circuit (3309901 – SAIDI # 3)

The Slemp Defeated Creek is a smaller circuit serving only 35 customers. The circuit has experienced 7 total outages for 2009. Two of these outages account for 82% of the CMI in 2009. These two outages can be seen in the chart below.

Interruption Start Date	Minor Cause	Clearing Device	Outage Duration	Total Cust Affected	Total Cust Min
06/11/2009	WEATHER – FLOOD/SLIDE	PRI OPEN	1,116	31	34,086
12/23/2009	WEATHER - ICE (1/2 inch or > 6 "Snow)	XFMR FUSE	3,386	4	13,544

The outage occurring on Dec 23 involved only four customers but lasted over two and half days. A major snow storm had caused several outages. This particular outage took awhile due to the clean up efforts that were ongoing trying to restore everyone's power.

The second outage which occurred on June 11, 2009 was caused by a slide. This outage also involved replacing a pole and due to the conditions it lasted a little under 2 days.

Due to their nature, these outages were difficult to restore. If the two outages listed above had not occurred, then the SAIDI for this circuit would have dropped drastically. Also, because of the unusual nature of these outages, there are no plans for corrective actions.

Stinnett Station – Beechfork 34KV Circuit (3311102 – SAIDI # 7)

Stinnett Beechfork is a dedicated circuit serving only five customers. Because of the low customer count, any outage involving the station breaker for any significant amount of time will greatly add to the SAIDI index. This circuit made the top ten worst performing circuits list because of one outage in particular. In late May, one of the breakers in the Stinnett Station failed violently spewing oil everywhere. An outage was scheduled by the Company in order to clean up the oil spill. The load from the other circuits within the Stinnett Station was transferred to other stations. However, the load on Stinnett Beechfork circuit could not be transferred resulting in an outage lasting a little over four hours.

Corrective Actions

Due to the rarity of the outage mentioned above no corrective outage is needed for this circuit.

Combs Station – Airport Gardens 12KV Circuit (3301402 – SAIFI # 6)

The top four outage causes comprising 87% percent of the customers interrupted on this circuit during 2009 can be found in the chart below:

Minor Cause	Nbr Interruptions	Total Cust Affected	Total Cust Min
TREE OUT OF ROW	9	1,972	449,745
TREE INSIDE ROW	17	1,449	216,196
EQUIPMENT FAILURE	17	1,339	199,181
VEHICLE ACCIDENT	1	1,040	164,319

Six of these outages occurred on either the feeder breaker zone or the first recloser zone, which means that a large number of customers were affected by these outages.

e.g. the outage involving the vehicle accident accounted for 16% of the customers interrupted on this circuit. This event caused the feeder breaker to open resulting in 1040 customers being interrupted for 15 hours.

Corrective Actions

In 2009, Kentucky Power obtained an improved device to help locate failing equipment by detecting EMI emanating from an arc. Though it will not find all the problems on a circuit, this device will aid in locating and preventing some outages. Due to the large number of outages caused by equipment failure on this circuit, the majority of the feeder will be scouted with this device.

Hazard Station – Black Gold 34KV Circuit (3302701 – SAIFI # 8)

The Hazard Black Gold circuit made the top ten worst performer list for SAIFI in 2009 due to 5 large outages occurring on the feeder breaker or on the first zone recloser. Below is a list of outages showing these 5 outages, which account for 81% of the customers interrupted on this circuit in all of 2009:

Interruption Start Date	Minor Cause	Clearing Device	Outage Duration	Total Cust Affected	Total Cust Min
07/26/2009	WEATHER - LIGHTNING	FDR BREAKER	211	626	83,418
07/26/2009	EQUIPMENT FAILURE	FDR BREAKER	10	529	5,290
04/02/2009	UNKNOWN (NON WEATHER)	RECLOSER	98	507	49,686
05/30/2009	TREE REMOVAL (NON AEP)	RECLOSER	295	501	62,361
06/26/2009	TREE INSIDE ROW	RECLOSER	135	501	46,677

Corrective Actions

Some of these outages may have been prevented with the use of devices to help detect failing equipment. In 2009, Kentucky Power obtained an improved device to help locate failing equipment by detecting EMI emanating from an arc. This tool will be used to scan the feeder breaker zone and the area past the first recloser in order to try to find failing equipment and prevent a large outage from occurring.

The Hazard Black Gold circuit is part of the Vegetation Management Plan for reclearing during 2010. Under this plan 5.22 line miles of ROW will be recleared and 50 acres of land will be sprayed on this circuit.

Collier Station – Smoot Creek 34KV Circuit (3308603 – SAIFI # 9)

The major outage categories for this circuit were Tree Inside ROW and Equipment Failure, accounting for 64% of the customers interrupted during 2009 on this circuit. Another 23% of the customers interrupted came from two single outages beyond company control (Vehicle Accident and Customer Equipment). The chart below lists the top four outages, which accounted for 51% of all customers interrupted during 2009:

Interruption Start Date	Minor Cause	Clearing Device	Outage Duration	Total Cust Affected	Total Customer Min
06/18/2009	TREE INSIDE ROW	FDR BKR	237	993	216,493
01/12/2009	VEHICLE ACCIDENT	RECLOSER	210	680	74,930
05/14/2009	CUST. EQUIPMENT > 1 CUST.	RECLOSER	9	677	6,093
06/16/2009	TREE INSIDE ROW	RECLOSER	92	672	61,824

Corrective Actions

In 2009, Kentucky Power obtained an improved device to help locate failing equipment by detecting EMI emanating from an arc. Though it will not find all the problems on a circuit, this device will aid in locating and preventing some outages. Due to the large number of outages caused by equipment failure on this circuit, the majority of the feeder will be scouted with this device.

Collier Smoot Creek circuit is also in the 2010 Hazard District Forestry Work Plan, which includes reclearing 4.73 line miles of ROW and 36 miles of basal spraying. These actions will prevent some tree related outages on this circuit in the coming year.

Chavies Station – Chavies 12KV Circuit (3301101 – SAIDI # 10)

Over 85% of the customer minutes interrupted were caused by either Tree Inside ROW or Tree Out of ROW outages on this circuit during 2009.

There were also eight separate outages that occurred on this circuit in the aftermath of a major winter storm that passed through Eastern Kentucky in late December 2009. Some of these outages took a long time to restore due to the severity of storm-related outages on other circuits in the area.

One particular outage that occurred on June 17 took over two days to restore service. The lengthy restoration time can be attributed to the terrain where the outage occurred. And there were numerous other outages in the area at the same time, limiting available resources. Tree crews were required to clear the road before the line crews could proceed with their work.

Another outage occurring on June 11 took close to a day to restore power. Due to the terrain and darkness, crews had to put off the patrol effort until the next day.

Corrective Actions

The Chavies Chavies circuit is part of the Hazard District Forestry Plan for 2010. In the plan, tree crews will reclear 3.21 line miles of ROW on this circuit. This will help some of the issues cause by trees, but may not prevent all such outages.

The Chavies Chavies circuit is part of a new distribution automation installation to be completed in 2010. In this plan the Haddix Canoe circuit will be able to automatically (with the aid of precise electronic devices) pick up load from the Chavies Chavies circuit in the event that power is lost in particular areas (and vise versa). This quick restoration process will help to reduce the customer minutes interrupted and thus will also reduce the SAIDI for this circuit

Kentucky Power Company

2009 WORST PERFORMING CIRCUITS

Analysis of Causes/Corrective Actions

Pikeville District

Sprigg Station – Sprigg 34.5 KV Circuit (2150103 – SAIFI #3)

Cause Code	Nbr Interruptions	Total Cust Affected	% Cust Affected	Total Cust Min
ANIMAL - NON BIRD	1	2	0.19 %	162
EQUIPMENT FAILURE	1	17	1.61 %	3,808
SCHEDULED COMPANY	5	527	50.00 %	120,641
TREE INSIDE ROW	6	30	2.85 %	3,209
TREE OUT OF ROW	5	478	45.35 %	79,522
Sum:	**18**	**1,054**	**100.0 %**	**207,342**

This circuit originates from a station located in West Virginia and serves only 148 Kentucky customers. The largest percentage of customers affected by an outage and the largest percentage of Customer Minutes of Interruption both come from 5 scheduled outages which were taken to allow right-of-way clearing in inaccessible locations by an aerial saw operation. These locations were both on the West Virginia and Kentucky sides of the river. Without these interruptions the SAIFI would have been only half of the recorded total. It is expected that the clearing done during these outages will reduce the exposure to trees at these locations and improve the circuit performance.

During 2009 regular right-of-way clearing was done on 1.2 miles of line on the Kentucky side of this circuit at a cost of $20,250. No additional clearing is planned for 2010 due to the work just completed.

Barrenshea Station – Vulcan Circuit (3200202 – SAIDI # 5)

Cause Code	Nbr Interrup-tions	% Nbr Interr	Total Cust Affected	% Cust Affected	Total Cust Min	% Total Cust Min
EQUIPMENT FAILURE	6	10.71 %	151	5.66 %	60,502	4.46 %
ERROR - OPERATIONS	1	1.79 %	1	0.04 %	142	0.01 %
FIRE - AFFECT > 1 CUST	1	1.79 %	5	0.19 %	485	0.04 %
SCHEDULED COMPANY	1	1.79 %	172	6.45 %	53,492	3.94 %
TREE INSIDE ROW	24	42.86 %	1,281	48.01 %	202,993	14.95 %
TREE OUT OF ROW	19	33.93 %	1,026	38.46 %	1,035,273	76.24 %
TREE REMOVAL	2	3.57 %	15	0.56 %	1,513	0.11 %
UNKNOWN (NON WEATHER)	2	3.57 %	17	0.64 %	3,472	0.26 %
Sum:	**56**	**100.0 %**	**2,668**	**100.0 %**	**1,357,872**	**100.0 %**

Trees outside the right-of-way are responsible for 76% of the Customer Minutes of Interruption, 34% of the number of outages, and 38% of the customers affected. Trees inside the right-of-way caused 15% of the Customer Minutes of Interruption, 43% of the outages, and 48% of the customers affected.

Right-of-Way clearing was performed in the Station Zone and the first mainline recloser zone during 2009. This covered approximately 7 miles of line. Thirty acres of brush spraying was also done. Total Forestry dollar cost for this circuit was $119,873 in 2009.

Additional reclearing is planned for 5 miles of line plus 14 acres of brush spraying. This particular area experienced 6 outages due to trees inside the right-of-way last year. Total Forestry dollars budgeted for 2010 on this circuit is approximately $77,000.

Spring Fork Station – 1 Phase Circuit (3404002 – SAIDI # 8)

Major-Minor Cause Code	Nbr Interrup-tions	% Nbr Interr	Total Cust Affected	% Cust Affected	Total Cust Min	% Total Cust Min
DL-TREE INSIDE ROW	1	16.67 %	1	0.96 %	26	0.06 %
DL-TREE OUT OF ROW	2	33.33 %	44	42.31 %	14,206	33.25 %
DL-TREE REMOVAL	1	16.67 %	29	27.88 %	6,988	16.35 %
DL-UNKNOWN (NON WEATHER)	1	16.67 %	1	0.96 %	137	0.32 %
TS-EQUIPMENT FAILURE	1	16.67 %	29	27.88 %	21,373	50.02 %
Sum:	**6**	**100.0 %**	**104**	**100.0 %**	**42,730**	**100.0 %**

One outage caused by equipment failure on the transmission line serving this station is responsible for 50% of the Customer Minutes of Interruption. Due to the inaccessible location of the structure, the outage lasted for 12 hours. Additional inspection of the transmission system has discovered 2 deteriorated crossarms and an outage to replace them is scheduled during March 2010.

Three distribution poles found to be bad during an inspection will also be changed out during the transmission outage. Inspection of the circuit is continuing and we will make repairs as necessary during this year. We have already changed out three additional poles found to be deteriorated.

Two outages due to trees outside the right-of-way account for 33% of the Customer Minutes. One of these outages was in the Station Zone affecting the whole circuit. No additional forestry work is scheduled for this circuit in 2010 because it was cleared by aerial saw in 2008 along with an inspection looking specifically for danger trees and right-of-way hotspots, which were cleared at that time. Trees inside the right-of-way only contributed 26 minutes of Customer Interruption during 2009.

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April 1, 2009

RE: ***An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices*** **- Administrative Case No. 2006-00494**

Dear Mr. Chaney:

Enclosed please find Louisville Gas and Electric Company and Kentucky Utilities Company's 2008 Annual Reliability Report pursuant to the Commission's Order dated October 26, 2007 in the above mentioned matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Louisville Gas and Electric Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2008

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	3.602
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-05
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-07
NUMBER OF MED IN REPORT YEAR	3.4	18

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	94.30
SAIFI	4.2	1.042
CAIDI	4.3	90.48

Including MED (Optional)

SAIDI	4.4	3823.19
SAIFI	4.5	2.246
CAIDI	4.6	1701.88

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	7.35	Animal	5.2.1	0.104
Construction	5.1.2	0.96	Construction	5.2.2	0.026
Lightning	5.1.3	9.78	Lightning	5.2.3	0.119
Non-Company	5.1.4	2.14	Non-Company	5.2.4	0.033
Unknown	5.1.5	20.34	Unknown	5.2.5	0.254
Overload	5.1.6	0.94	Overload	5.2.6	0.009
Planned Work	5.1.7	5.72	Planned Work	5.2.7	0.083
Trees	5.1.8	20.33	Trees	5.2.8	0.136
Utility Equip	5.1.9	19.79	Utility Equip	5.2.9	0.205
Vehicle	5.1.10	6.93	Vehicle	5.2.10	0.073

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
DU0002	6.1.1	851.53	Vehicle
AL1444	6.1.2	659.44	Vehicle
HI1472	6.1.3	578.23	Lightning
BR1186	6.1.4	573.72	Trees
SW1184	6.1.5	552.40	Trees
BB1103	6.1.6	502.34	Trees
SP1115	6.1.7	479.92	Vehicle
LS1247	6.1.8	409.64	Trees
OX1278	6.1.9	367.00	Utility Equipment
WS1305	6.1.10	358.37	Vehicle

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
SW1184	6.2.1	5.210	Trees
CA1304	6.2.2	5.001	Animal, Lightning
FV1477	6.2.3	4.927	Utility Equipment
AK1290	6.2.4	4.278	Planned Work
HB1145	6.2.5	4.010	Lightning
BR1186	6.2.6	3.901	Utility Equipment
FL1497	6.2.7	3.704	Utility Equipment
BB1103	6.2.8	3.532	Trees
WP1104	6.2.9	3.524	Trees
SM1366	6.2.10	3.409	Utility Equipment

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability Report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI, and customer feedback as measured by satisfaction surveys.

Effectiveness of the program:
Cycle - 4.56 years.
Tree SAIDI - 20.33 minutes
Tree SAIFI - .136
Tree CAIDI - 149 minutes
Customer satisfaction in Power Quality and Reliability has been stable over the past three years. Power Quality and Reliability is one of the highest ranking components of the study.

The routine trim schedule, mid cycle, herbicide, and worst performing circuits plans were completed as planned.

Adjustments made to the Vegetation Management Plan in 2008 included:

1).On September 14, 2008, Hurricane Ike caused significant damage to the system. Tree crews worked through December 31, 2008 to remove damaged trees and limbs that were of imminent risk to system reliability.
2).The Companies reduced from five to four professional tree contractor companies (Nelson, Phillips, Townsend and Wright) to improve efficiency in the plan.

Changes to be implemented in 2009:

1). Increased focus on hazard tree removals of off right of way trees.
2). Change mid cycle from spring to summer to more readily identify dead limbs and trees.
3). The Ice Storm of January 27, 2009, caused significant damage to the trees across the system. Tree crews were employed to remove damaged trees and limbs that were of imminent risk to system reliability.

KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 8: UTILITY COMMENTS

The Institute of Electrical and Electronic Engineers (IEEE) standard number IEEE 1366 - 2003 has been used to define the terms in the reliability report, including the criteria for omitting events classified as major event days. The 2008 data is reported by the IEEE exclusion definition. Data is not available based on the IEEE rule prior to 2005.

On September 14, 2008, Hurricane Ike caused significant damage to the system. Due to the catastrophic nature of Hurricane Ike, a total of eleven days was included as a major event.

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Kentucky Utilities Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

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T_{MED}	3.1	3.602
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LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-07
NUMBER OF MED IN REPORT YEAR	3.4	18

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	73.28
SAIFI	4.2	0.748
CAIDI	4.3	97.92

Including MED (Optional)

SAIDI	4.4	438.74
SAIFI	4.5	1.195
CAIDI	4.6	367.00

Notes:

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KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	3.83	Animal	5.2.1	0.060
Construction	5.1.2	0.75	Construction	5.2.2	0.016
Lightning	5.1.3	9.26	Lightning	5.2.3	0.088
Non-Company	5.1.4	1.23	Non-Company	5.2.4	0.018
Unknown	5.1.5	11.62	Unknown	5.2.5	0.119
Overload	5.1.6	3.71	Overload	5.2.6	0.043
Planned Work	5.1.7	3.50	Planned Work	5.2.7	0.054
Trees	5.1.8	22.06	Trees	5.2.8	0.158
Utility Equip	5.1.9	12.03	Utility Equip	5.2.9	0.140
Vehicle	5.1.10	5.30	Vehicle	5.2.10	0.054

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
0643	6.1.1	1310.3	Utility Equipment
0333	6.1.2	1220.7	Non-Company
0311	6.1.3	1072.4	Trees
0467	6.1.4	827.1	Non-Company
1712	6.1.5	794.0	Lightning
0423	6.1.6	772.6	Trees
0007	6.1.7	750.9	Overload
1633	6.1.8	747.4	Utility Equipment
0458	6.1.9	717.1	Trees
0948	6.1.10	667.4	Trees

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
0311	6.2.1	9.170	Trees
0333	6.2.2	5.556	Non-Company
0254	6.2.3	5.450	Utility Equipment
0201	6.2.4	5.264	Overload
0306	6.2.5	5.000	Non-Company
0423	6.2.6	4.812	Trees
4450	6.2.7	4.811	Overload
4340	6.2.8	4.472	Planned Work
0515	6.2.9	4.437	Lightning
1633	6.2.10	4.253	Overload

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

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The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI, and customer feedback as measured by satisfaction surveys.

Effectiveness of the program:
Cycle - 4.56 years.
Tree SAIDI - 22.06 minutes
Tree SAIFI - .158
Tree CAIDI - 139 minutes
Customer satisfaction in Power Quality and Reliability has been stable over the past three years. Power Quality and Reliability is one of the highest ranking components of the study.

The routine trim schedule, mid cycle, herbicide, and worst performing circuits plans were completed as planned.

Adjustments made to the Vegetation Management Plan in 2008 included:

1).On September 14, 2008, Hurricane Ike caused significant damage to the system. Tree crews worked through December 31, 2008 to remove damaged trees and limbs that were of imminent risk to system reliability.
2).The Companies reduced from five to four professional tree contractor companies (Nelson, Phillips, Townsend and Wright) to improve efficiency in the plan.

Changes to be implemented in 2009:

1). Increased focus on hazard tree removals of off right of way trees.
2). Change mid cycle from spring to summer to more readily identify dead limbs and trees.
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KENTUCKY PUBLIC SERVICE COMMISSION

SECTION 8: UTILITY COMMENTS

The Institute of Electrical and Electronic Engineers (IEEE) standard number IEEE 1366 - 2003 has been used to define the terms in the reliability report, including the criteria for omitting events classified as major event days. The 2008 data is reported by the IEEE exclusion definition. Data is not available based on the IEEE rule prior to 2005.

On September 14, 2008, Hurricane Ike caused significant damage to the system. Due to the catastrophic nature of Hurricane Ike, a total of 11 days was inlcuded as a major event.

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Frankfort, Kentucky 40602-0615

April 1, 2010

RE: ***An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices*** **- Administrative Case No. 2006-00494**

Dear Mr. Chaney:

Enclosed please find Louisville Gas and Electric Company and Kentucky Utilities Company's 2009 Annual Reliability Report pursuant to the Commission's Order dated October 26, 2007 in the above mentioned matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp

Rick E. Lovekamp

KENTUCKY PUBLIC SERVICE COMMISSION

Louisville Gas and Electric Company
Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

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REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2009

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	4.397
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-05
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-08
NUMBER OF MED IN REPORT YEAR	3.4	18

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	90.20
SAIFI	4.2	0.941
CAIDI	4.3	95.83

Including MED (Optional)

SAIDI	4.4	2845.01
SAIFI	4.5	2.073
CAIDI	4.6	1372.61

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Louisville Gas and Electric Company
Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	5.40	Animal	5.2.1	0.082
Construction	5.1.2	1.31	Construction	5.2.2	0.010
Lightning	5.1.3	10.32	Lightning	5.2.3	0.077
Non-Company	5.1.4	2.50	Non-Company	5.2.4	0.040
Unknown	5.1.5	16.62	Unknown	5.2.5	0.184
Overload	5.1.6	0.54	Overload	5.2.6	0.006
Planned Work	5.1.7	6.46	Planned Work	5.2.7	0.093
Trees	5.1.8	17.35	Trees	5.2.8	0.129
Utility Equip	5.1.9	23.28	Utility Equip	5.2.9	0.254
Vehicle	5.1.10	6.43	Vehicle	5.2.10	0.067

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
CY1483	6.1.1	1123.00	Vehicle
SK1127	6.1.2	644.45	Trees
HL1157	6.1.3	633.06	Trees
WS1322	6.1.4	621.63	Utility Equipment
ET1421	6.1.5	599.00	Lightning
BK0003	6.1.6	583.45	Trees
AK1290	6.1.7	574.03	Trees
SM1366	6.1.8	505.10	Non-Company
HK1233	6.1.9	452.31	Lightning
FL1497	6.1.10	447.43	Non-Company

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
AK1290	6.2.1	6.918	Trees
FV1477	6.2.2	5.846	Lightning
ET1423	6.2.3	5.610	Lightning
ET1421	6.2.4	5.583	Lightning
WS1322	6.2.5	5.317	Utility Equipment
SM1366	6.2.6	4.571	Non-Company
BY1278	6.2.7	4.322	Utility Equipment
CL1231	6.2.8	4.308	Animal
PR1390	6.2.9	4.037	Utility Equipment
FL1497	6.2.10	4.020	Non-Company

KENTUCKY PUBLIC SERVICE COMMISSION

Louisville Gas and Electric Company
Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability Report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI, and customer feedback as measured by satisfaction surveys.

Effectiveness of the program:

LG&E/ KU Tree Cycle - 4.52 years.
LG&E Tree SAIDI - 17.35 minutes
LG&E Tree SAIFI - 0.129
LG&E Tree CAIDI - 134.5 minutes

The Companies have been able to maintain customer satisfaction in Power Quality and Reliability with the challenges of the major storms in 2009.

The routine trim schedule, mid cycle, herbicide, and worst performing circuits plans were completed as planned.

Adjustments made to the tree plan in 2009 included:

1) Increased the focus on hazard tree removals for off right of way trees.
2) Changed the timing for the mid cycle three phase trim from winter to summer to more readily identify dead limbs and trees.

Changes to be implemented in 2010:

No changes from 2009 plan.

SECTION 8: UTILITY COMMENTS

On January 27, 2009, a major ice storm caused significant damage to the system statewide. On December 18, 2009, a major snow storm caused significant damage to the Southeast area of the system. The residual effects of these storms immediately following the MED exclusion days and throughout the year had a significant negative impact on system performance. Tree crews were employed from January 27 through April 3, 2009 to remove damaged trees and limbs that were of imminent risk to system reliability. Plans are in place to address all Worst Performing Circuits.

KENTUCKY PUBLIC SERVICE COMMISSION

Kentucky Utilities Company
Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Kentucky Utilities Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2009

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	4.397
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-05
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-08
NUMBER OF MED IN REPORT YEAR	3.4	18

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	102.06
SAIFI	4.2	0.937
CAIDI	4.3	108.93

Including MED (Optional)

SAIDI	4.4	2786.58
SAIFI	4.5	1.962
CAIDI	4.6	1420.57

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Kentucky Utilities Company
Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	7.74	Animal	5.2.1	0.094
Construction	5.1.2	1.55	Construction	5.2.2	0.020
Lightning	5.1.3	12.02	Lightning	5.2.3	0.095
Non-Company	5.1.4	2.14	Non-Company	5.2.4	0.031
Unknown	5.1.5	14.44	Unknown	5.2.5	0.135
Overload	5.1.6	3.75	Overload	5.2.6	0.038
Planned Work	5.1.7	7.32	Planned Work	5.2.7	0.074
Trees	5.1.8	28.34	Trees	5.2.8	0.180
Utility Equip	5.1.9	19.90	Utility Equip	5.2.9	0.218
Vehicle	5.1.10	4.85	Vehicle	5.2.10	0.052

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
1663	6.1.1	1842.60	Trees
1554	6.1.2	1713.27	Trees
0314	6.1.3	1597.34	Lightning
0304	6.1.4	1325.07	Trees
0659	6.1.5	1136.85	Trees
2309	6.1.6	1112.13	Trees
1541	6.1.7	931.85	Trees
1320	6.1.8	913.21	Utility Equipment
0495	6.1.9	906.29	Trees
0276	6.1.10	897.77	Utility Equipment

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
0304	6.2.1	7.151	Trees
0314	6.2.2	6.857	Trees
0311	6.2.3	6.480	Trees
0414	6.2.4	6.106	Utility Equipment
0309	6.2.5	5.827	Trees
0415	6.2.6	5.589	Utility Equipment
0488	6.2.7	5.477	Trees
0303	6.2.8	5.294	Trees
0495	6.2.9	5.213	Trees
0458	6.2.10	4.955	Trees

KENTUCKY PUBLIC SERVICE COMMISSION

Kentucky Utilities Company
Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI, and customer feedback as measured by satisfaction surveys.

Effectiveness of the program:

KU/LG&E Tree Cycle - 4.52 years.
KU (Kentucky) Tree SAIDI - 28.34 minutes
KU (Kentucky) Tree SAIFI - 0.180
KU (Kentucky) Tree CAIDI - 157.4 minutes

The Companies have been able to maintain customer satisfaction in Power Quality and Reliability with the challenges of the major storms in 2009.

The routine trim schedule, mid cycle, herbicide, and worst performing circuits plans were completed as planned.

Adjustments made to the Vegetation Management plan in 2009 included:

1) Increased focus on hazard tree removals for off right of way trees.
2) Changed the timing for the mid cycle three phase trim from winter to summer to more readily identify dead limbs and trees.

Changes to be implemented in 2010:

No changes from 2009 plan.

SECTION 8: UTILITY COMMENTS

On January 27, 2009, a major ice storm caused significant damage to the system statewide. On December 18, 2009, a major snow storm caused significant damage to the Southeast area of the system. The residual effects of these storms immediately following the MED exclusion days and throughout the year had a significant negative impact on system performance. Tree crews were employed from January 27 through April 3, 2009 to remove damaged trees and limbs that were of imminent risk to system reliability. Plans are in place to address all Worst Performing Circuits.

Case No. 2006-00494 – Internal Distribution List

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Allyson Sturgeon
Greg Thomas
Nelson Maynard
Lonnie Bellar
Rick Lovekamp

PPL companies

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PUBLIC SERVICE COMMISSION

Mr. Reggie Chaney
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April 1, 2011

RE: ***An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices*** **- Administrative Case No. 2006-00494**

Dear Mr. Chaney:

Enclosed please find Louisville Gas and Electric Company's and Kentucky Utilities Company's 2010 Annual Reliability Report pursuant to the Commission's Order dated October 26, 2007 in the above referenced matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp

Rick E. Lovekamp

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Louisville Gas and Electric Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2010

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	6.485
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-05
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-09
NUMBER OF MED IN REPORT YEAR	3.4	0

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	105.87
SAIFI	4.2	1.220
CAIDI	4.3	86.78

Including MED (Optional)

SAIDI	4.4	105.87
SAIFI	4.5	1.220
CAIDI	4.6	86.78

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	6.10	Animal	5.2.1	0.090
Construction	5.1.2	2.10	Construction	5.2.2	0.051
Lightning	5.1.3	16.71	Lightning	5.2.3	0.158
Non-Company	5.1.4	1.30	Non-Company	5.2.4	0.018
Unknown	5.1.5	19.51	Unknown	5.2.5	0.278
Overload	5.1.6	0.69	Overload	5.2.6	0.007
Planned Work	5.1.7	8.40	Planned Work	5.2.7	0.102
Trees	5.1.8	13.79	Trees	5.2.8	0.089
Utility Equip	5.1.9	30.03	Utility Equip	5.2.9	0.365
Vehicle	5.1.10	7.25	Vehicle	5.2.10	0.062

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
SP3302	6.1.1	2632.00	Trees
TT3313	6.1.2	2271.00	Trees
AL1377	6.1.3	983.00	Utility Equipment
SK1128	6.1.4	640.39	Trees
CL1405	6.1.5	516.86	Utility Equipment
BR1352	6.1.6	469.76	Utility Equipment
HC1434	6.1.7	457.75	Utility Equipment
TA1106	6.1.8	453.09	Trees
SK1127	6.1.9	449.88	Trees
CO1194	6.1.10	441.47	Utility Equipment

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
TT3313	6.2.1	12.000	Trees
SP3302	6.2.2	8.000	Trees
WP1104	6.2.3	5.809	Trees
AL1377	6.2.4	5.667	Utility Equipment
SM1360	6.2.5	5.631	Utility Equipment
ET1170	6.2.6	5.215	Animal
OK1272	6.2.7	4.753	Utility Equipment
HI1475	6.2.8	4.636	Non-Company
HC1294	6.2.9	4.002	Utility Equipment
MD1452	6.2.10	3.685	Utility Equipment

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability Report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI.

Effectiveness of the program:

LG&E/ KU Tree Cycle - 4.52 years.
LG&E Tree SAIDI - 13.79 minutes
LG&E Tree SAIFI - 0.089
LG&E Tree CAIDI - 154.9 minutes

The routine trim schedule, mid cycle, herbicide, and worst performing circuits were completed as planned.

Adjustments made to the tree plan in 2010 included:

Implemented an Enhanced Hazard Tree Removal Program to increased focus on hazard tree removals for off right of way trees.

Changes to be implemented in 2011:

No changes planned.

SECTION 8: UTILITY COMMENTS

There were no major events in 2010. SAIDI declined in 2010 compared to 2009 due to increased event durations related to lightning and utility equipment failures and planned work attributed to system stress from the 2009 major storm events. SAIDI related to tree events improved. SAIFI declined in 2010 compared to 2009 dued to increased event frequency related to lightning and utility equipment failures and planned work attributed to system stress from the 2009 major storm events. SAIFI related to trees events improved.

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Kentucky Utilities Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@eon-us.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2010

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	7.095
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-05
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-09
NUMBER OF MED IN REPORT YEAR	3.4	0

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	89.83
SAIFI	4.2	0.948
CAIDI	4.3	94.73

Including MED (Optional)

SAIDI	4.4	89.83
SAIFI	4.5	0.948
CAIDI	4.6	94.73

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	6.77	Animal	5.2.1	0.099
Construction	5.1.2	0.77	Construction	5.2.2	0.028
Lightning	5.1.3	13.66	Lightning	5.2.3	0.139
Non-Company	5.1.4	1.88	Non-Company	5.2.4	0.018
Unknown	5.1.5	14.96	Unknown	5.2.5	0.140
Overload	5.1.6	2.29	Overload	5.2.6	0.030
Planned Work	5.1.7	6.66	Planned Work	5.2.7	0.100
Trees	5.1.8	18.72	Trees	5.2.8	0.133
Utility Equip	5.1.9	18.25	Utility Equip	5.2.9	0.206
Vehicle	5.1.10	5.87	Vehicle	5.2.10	0.055

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
4331	6.1.1	3264.18	Trees
0467	6.1.2	1693.00	Utility Equipment
0333	6.1.3	1582.11	Non-Company
0615	6.1.4	1296.71	Trees
0495	6.1.5	1217.89	Trees
0937	6.1.6	1067.48	Trees
0316	6.1.7	1010.97	Trees
0614	6.1.8	972.17	Lightning
2310	6.1.9	956.95	Trees
4476	6.1.10	863.20	Trees

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
0495	6.2.1	13.440	Trees
0316	6.2.2	11.134	Trees
0333	6.2.3	6.611	Planned Work
0940	6.2.4	6.361	Utility Equipment
1497	6.2.5	6.233	Planned Work
0436	6.2.6	5.640	Utility Equipment
0593	6.2.7	5.082	Lightning
3410	6.2.8	4.772	Lightning
0937	6.2.9	4.759	Trees
0701	6.2.10	4.180	Utility Equipment

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

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Effectiveness of the program:

KU/LG&E Tree Cycle - 4.52 years.
KU (Kentucky) Tree SAIDI - 18.72 minutes
KU (Kentucky) Tree SAIFI - 0.133
KU (Kentucky) Tree CAIDI - 140.75 minutes

The routine trim schedule, mid cycle, herbicide, and worst performing circuits were completed as planned.

Adjustments made to the tree plan in 2010 included:

Implemented an Enhanced Hazard Tree Removal Program to increased focus on hazard tree removals for off right of way trees.

Changes to be implemented in 2011:

No changes planned.

SECTION 8: UTILITY COMMENTS

There were no major events in 2010. SAIDI improved in 2010 compared to 2009 due to reduced durations related to tree events. SAIFI declined slightly in 2010 compared to 2009 dued to increased event frequency related to lightning. SAIFI related to trees events improved.

PPL companies

Kimra Cole
Director of Engineering
Kentucky Public Service Commission
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March 26, 2012

RE: ***An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices*** **- Administrative Case No. 2006-00494**

Dear Ms. Cole:

Enclosed please find Louisville Gas and Electric Company's and Kentucky Utilities Company's 2011 Annual Reliability Report pursuant to the Commission's Order dated October 26, 2007 in the above referenced matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp

Rick E. Lovekamp

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	**Louisville Gas and Electric Company**
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@lge-ku.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2011

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	5.966
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-06
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-10
NUMBER OF MED IN REPORT YEAR	3.4	9

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	94.36
SAIFI	4.2	1.046
CAIDI	4.3	90.25

Including MED (Optional)

SAIDI	4.4	604.93
SAIFI	4.5	1.667
CAIDI	4.6	362.92

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
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4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	5.46	Animal	5.2.1	0.081
Construction	5.1.2	0.62	Construction	5.2.2	0.024
Lightning	5.1.3	8.26	Lightning	5.2.3	0.069
Non-Company	5.1.4	2.35	Non-Company	5.2.4	0.023
Unknown	5.1.5	13.23	Unknown	5.2.5	0.184
Overload	5.1.6	0.26	Overload	5.2.6	0.009
Planned Work	5.1.7	10.00	Planned Work	5.2.7	0.144
Trees	5.1.8	21.95	Trees	5.2.8	0.143
Utility Equip	5.1.9	26.82	Utility Equip	5.2.9	0.311
Vehicle	5.1.10	5.42	Vehicle	5.2.10	0.058

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
BB1103	6.1.1	728.14	Trees
TA1106	6.1.2	723.37	Utility Equipment
ET1421	6.1.3	711.94	Utility Equipment
HC1434	6.1.4	640.00	Lightning
FV1477	6.1.5	563.08	Utility Equipment
LS1247	6.1.6	541.72	Trees
HI1472	6.1.7	538.96	Utility Equipment
AL1440	6.1.8	524.00	Lightning
SP3302	6.1.9	470.40	Planned Work
HB1148	6.1.10	436.04	Trees

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
TA1106	6.2.1	8.057	Utility Equipment
WP1104	6.2.2	6.231	Utility Equipment
CY1484	6.2.3	6.222	Utility Equipment
FV1477	6.2.4	5.808	Utility Equipment
PR1390	6.2.5	5.078	Utility Equipment
ET1421	6.2.6	4.765	Utility Equipment
HB1148	6.2.7	4.287	Utility Equipment
BB1103	6.2.8	4.029	Trees
ML1284	6.2.9	3.814	Lightning
AK1290	6.2.10	3.754	Utility Equipment

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability Report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI.

Effectiveness of the program:

LG&E/ KU Tree Cycle - 4.82 years.
LG&E Tree SAIDI - 21.95 minutes
LG&E Tree SAIFI - 0.143
LG&E Tree CAIDI - 153.50 minutes

The hazard tree program, mid cycle, herbicide, and worst performing circuits were completed as planned. The overall routine trim cycle extended in 2011 compared to 2010 due to an increased focus on tree removals. Tree related SAIDI and SAIFI increased in 2011 compared to 2010 due to weather related events and growth related to the record rainfall year as reported by the National Weather service. A total of 4,390 trees were removed by the Enhanced Hazard Tree program.

Adjustments made to the tree plan in 2011 included:

Implemented an Enhanced Hazard Tree Removal Program to increased focus on hazard tree removals for off right of way trees.

Changes to be implemented in 2012:

Continue to work the hazard tree plan.

SECTION 8: UTILITY COMMENTS

There were 9 major event days in 2011. SAIDI and SAIFI improved in 2011 compared to 2010 due to decreases related to lightning and utility equipment failures. Non-weather related SAIDI and SAIFI improved in 2011 compared to 2010 due to less equipment failure. CAIDI increased in 2011 compared to 2010 due to a greater system improvement in SAIFI over the improvement in SAIDI.
The top 10 Worst Performing Circuits for SAIDI and SAIFI have been evaluated for deficiencies. Corrective action was either completed in 2011 or planned and scheduled to be completed in 2012.

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	**Kentucky Utilities Company**
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@lge-ku.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2011

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	6.711
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1-Jan-06
LAST DATE USED TO DETERMINE T_{MED}	3.3	31-Dec-10
NUMBER OF MED IN REPORT YEAR	3.4	3

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	100.55
SAIFI	4.2	0.989
CAIDI	4.3	101.63

Including MED (Optional)

SAIDI	4.4	148.14
SAIFI	4.5	1.085
CAIDI	4.6	136.59

Notes:

1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
2) Reports are due on the first business day of April of each year
3) Reports cover the calendar year ending in the December before the reports are due.
4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES
Excluding MED

CAUSE CODE DESCRIPTION		SAIDI VALUE	CAUSE CODE DESCRIPTION		SAIFI VALUE
Animal	5.1.1	4.46	Animal	5.2.1	0.051
Construction	5.1.2	0.91	Construction	5.2.2	0.016
Lightning	5.1.3	15.94	Lightning	5.2.3	0.172
Non-Company	5.1.4	2.16	Non-Company	5.2.4	0.019
Unknown	5.1.5	12.16	Unknown	5.2.5	0.140
Overload	5.1.6	0.64	Overload	5.2.6	0.009
Planned Work	5.1.7	7.31	Planned Work	5.2.7	0.097
Trees	5.1.8	32.74	Trees	5.2.8	0.210
Utility Equip	5.1.9	18.66	Utility Equip	5.2.9	0.220
Vehicle	5.1.10	5.57	Vehicle	5.2.10	0.055

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER		SAIDI VALUE	MAJOR OUTAGE CATEGORY
1509	6.1.1	2863.23	Equipment failure
0360	6.1.2	1494.91	Trees
4331	6.1.3	1358.11	Planned Work
0488	6.1.4	1302.09	Trees
0304	6.1.5	1152.57	Trees
0324	6.1.6	1066.56	Trees
0481	6.1.7	889.89	Planned Work
0390	6.1.8	856.90	Trees
0491	6.1.9	763.93	Utility Equipment
2230	6.1.10	754.79	Trees

CIRCUIT IDENTIFIER		SAIFI VALUE	MAJOR OUTAGE CATEGORY
0390	6.2.1	6.832	Trees
0819	6.2.2	6.090	Trees and Planned Work
0365	6.2.3	5.643	Trees
0413	6.2.4	5.562	Trees
4331	6.2.5	5.444	Planned Work
0837	6.2.6	5.268	Planned Work
0426	6.2.7	5.011	Trees and Planned work
0841	6.2.8	5.000	Planned Work
2440	6.2.9	4.888	Trees
0324	6.2.10	4.878	Non-Company and Planned work

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and nine company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI.

Effectiveness of the program:

KU/LG&E Tree Cycle - 4.82 years.
KU (Kentucky) Tree SAIDI - 32.74 minutes
KU (Kentucky) Tree SAIFI - 0.210
KU (Kentucky) Tree CAIDI - 155.91 minutes

The hazard tree program, mid cycle, herbicide, and worst performing circuits were completed as planned. The overall routine trim cycle extended in 2011 compared to 2010 due to an increased focus on tree removals . Tree related SAIDI and SAIFI increased in 2011 compared to 2010 due to weather events (off right of way trees) and growth related to the record rainfall year as reported by the National Weather service. A total of 20,161 trees were removed by the Enhanced Hazard Tree program.

Adjustments made to the tree plan in 2011 included:

Implemented an Enhanced Hazard Tree Removal Program to increased focus on hazard tree removals for off right of way trees.

Changes to be implemented in 2012:

Continue to work the hazard tree plan.

SECTION 8: UTILITY COMMENTS

There were 3 major event days in 2011. SAIDI and SAIFI increased in 2011 compared to 2010 due to an increase in weather related events - lightning and off right of way tree outages. Non-weather related SAIDI and SAIFI improved in 2011 compared to 2010. CAIDI increased in 2011 compared to 2010 due to a greater increase in SAIDI over the increase in SAIFI. The top 10 Worst Performing Circuits for SAIDI and SAIFI have been evaluated for deficiencies. Corrective action was either completed in 2011 or planned and scheduled to be completed in 2012.

Madison Gas and Electric Company
P.O. Box 1231
Madison, WI 53701-1231
608-252-7000

your community energy company

April 29, 2009

Via Electronic Regulatory Filing

Gas and Energy Division
Public Service Commission of Wisconsin
Post Office Box 7854
Madison, Wisconsin 53707-7854

Subject: MGE's 2009 Annual Reliability Report - Docket 05-GF-113

Attached find Madison Gas and Electric Company's annual reliability report required under Wis. Admin. Code § PSC 113.0604.

If you have any questions, please contact me at 252-7942 or at dblankenheim@mge.com.

Sincerely,

David B. Blankenheim
Director - Operations Support

ms

Attachment

Madison Gas and Electric Company

Annual Reliability Report - PSC 113.0604
April 2009

PSC 113.0604 (1)

The names of the Madison Gas and Electric Company (MGE) distribution feeders incorporate the name of the substation that supplies them and the voltage of the feeder. Feeders from 13.8-kV substations are given numbers in the form "13xx" while names of feeders from 4-kV substations are in the form "4xx." For example, SYC 1310 is a 13.8-kV feeder from the Sycamore Substation and BLK 451 is a 4-kV feeder from the Blackhawk Substation.

PSC 113.0604 (2)(a) – Overall MGE System Reliability

MGE operates in a single area in Dane County for the electric distribution system. The chart below shows our System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), and Customer Average Interruption Duration Index (CAIDI) statistics for 2007 and 2008.

Total Annual Statistics

Year	Customers	Customers Out	Customer Minutes	SAIFI	SAIDI (minutes)	CAIDI (minutes)
2007	137,724	57,949	5,705,582	0.421	41.57	98.46
2008	138,507	81,439	8,395,386	0.588	60.61	103.09

Facilities Owned by Others

In 2008, MGE customers did not experience any outages due to disturbances on transmission facilities owned by others.

PSC 113.0604 (2)(b)(c) – Worst-Performing Circuits

The MGE distribution circuits that are the highest priority based on SAIFI and momentary events (ME) in 2008 are shown in the table below. MGE selects the circuits with the highest SAIFI starting with the highest and moving down until a gap occurs in the SAIFI values near ten circuits. In addition, MGE selects five to ten circuits based on the number of ME experienced starting with the highest and moving down until a gap occurs in the ME totals. The circuits are ranked based on the sum of SAIFI and ME count. Some circuits may fall into both categories. MGE is required to list its ten worst-performing circuits but has listed 21 when considering SAIFI and ME.

MGE uses SAIFI and ME to identify circuits that are likely to need reliability improvement and places less emphasis on SAIDI and CAIDI. This is because when customers experience an interruption, most of the inconvenience is present regardless of the duration. Very long outage durations are unusual, so focusing on minimizing interruptions offers the greatest benefit to customer satisfaction.

Customers may experience momentary service interruptions when wildlife or trees briefly contact the equipment on the electric distribution system. The purpose of momentarily tripping and reclosing the feeder is to allow temporary faults to clear and avoid any customer outages. When the fault is permanent, the momentary trip and reclose will not clear the fault and another protective action will occur. Permanent faults on taps off the main trunk will cause a fuse to blow; permanent faults on the main feeder trunk will cause a field recloser or a feeder breaker to lock open. Customers on the entire feeder may experience a ME even though the permanent fault caused a subsequent outage to only a few customers on just a small portion of the feeder.

The SAIDI and CAIDI indices (outage duration) are highest during storm situations and are often related to the logistics of responding to widespread outages so they are less useful in identifying areas of lower reliability. High CAIDI can also be associated with cable failures due to the time-consuming work of locating and repairing failed cables. To avoid outages from cable failures, MGE is aggressively replacing cables that are reaching 30 years of age or exhibit a history of failures. This work is not being done on a circuit-by-circuit basis because cable age and history do not depend on circuit boundaries.

Rank	Circuit	SAIFI	Momentary Events*
1	WPT 1332	0.569	11.3
2	SPR 1312	1.171	10.0
3	SHW 432	4.866	5.0
4	GLY 432	0.084	9.0
5	RYS 1310	0.183	8.0
6	WLT 1321	0.176	8.0
7	WTN 1320	0.292	8.0
8	SHW 434	0.000	8.0
9	SPR 1334	2.497	5.0
10	WLT 1322	3.293	4.0
11	PHB 1314	0.277	7.0
12	TKY 1330	0.262	7.0
13	SPR 1336	0.239	7.0
14	FPT 435	3.060	4.0
15	GLY 433	3.038	4.0
16	NSP 1318	2.451	2.0
17	WLT 1334	4.000	0.0
18	BLD 1304	2.910	1.0
19	WLT 1314	3.760	0.0
20	WCA 432	3.689	0.0
21	UHF 451	3.168	0.0

* MEs refer to service interruptions occurring for less than five minutes. This may include more than one recloser cycle. Field recloser operations that affect only a portion of the customers on a circuit account for any decimals.

WESTPORT (WPT) 1332

CAUSE	SAIFI	ME
Cable failures	0.016	0.0
Equipment failures	0.013	1.5
Storm-related	0.057	4.8
Substations	0.000	0.0
Tree-related	0.472	0.7
Wildlife-related	0.005	1.0
Other	0.006	3.2
TOTAL	0.569	11.3

Most of the MEs were primarily due to storms and unknown causes.

This circuit was reconfigured late in 2008 to allow its two reclosers to more equally cover the circuit. The reclosers have been upgraded and data will be downloaded from them after unknown events to help diagnose the cause and location so that remedial action can be taken.

SPRECHER (SPR) 1312

CAUSE	SAIFI	ME
Cable failures	0.020	2.0
Equipment failures	0.032	2.0
Storm-related	0.008	2.0
Substations	0.000	0.0
Tree-related	1.052	1.0
Wildlife-related	0.059	3.0
Other	0.000	0.0
TOTAL	1.171	10.0

For the MEs, a pattern of wildlife contacts on a portion of this circuit has been noted over the past several years, and nearby portions of SPR 1334 and RYS 1310.

The area west of I-90/94, east of USH 51, north of Buckeye Road and south of Cottage Grove Road will have wildlife protection added to overhead equipment if it is not already installed. Also in this area, cutouts will be inspected and replaced as necessary.

SHOREWOOD (SHW) 432

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.089	0.0
Storm-related	0.000	1.0
Substations	2.000	0.0
Tree-related	1.777	0.0
Wildlife-related	0.000	0.0
Other	0.000	4.0
TOTAL	4.866	5.0

Two of the outages on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit (see parent circuit WLT 1322 in this report). Two other major outages were due to trees, which has also been a cause for outages in recent years.

A key portion of the overhead line in the area will be replaced with an underground line in 2009, thereby avoiding tree-related outages and also reducing the extent of tree trimming in the area.

GLENWAY (GLY) 432

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.041	2.0
Substations	0.000	0.0
Tree-related	0.039	3.0
Wildlife-related	0.000	0.0
Other	0.004	4.0
TOTAL	0.084	9.0

Eight of the nine MEs on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit (see parent circuit WLT 1321 in this report).

No action is planned on this circuit.

ROYSTER (RYS) 1310

CAUSE	SAIFI	ME
Cable failures	0.019	1.0
Equipment failures	0.017	0.0
Storm-related	0.118	4.0
Substations	0.000	0.0
Tree-related	0.012	0.0
Wildlife-related	0.011	2.0
Other	0.006	1.0
TOTAL	0.183	8.0

For the MEs, a pattern of wildlife contacts on a portion of this circuit has been noted over the past several years, and nearby portions of SPR 1312 and RYS 1310.

The area west of I-90/94, east of USH 51, north of Buckeye Road and south of Cottage Grove Road will have wildlife protection added to overhead equipment if it is not already installed. Also in this area, cutouts will be inspected and replaced as necessary.

WALNUT (WLT) 1321

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.002	0.0
Storm-related	0.027	2.0
Substations	0.001	0.0
Tree-related	0.021	2.0
Wildlife-related	0.000	0.0
Other	0.125	4.0
TOTAL	0.176	8.0

Three of the "Other" causes for MEs on this circuit were not specifically identifiable.

Faulted circuit indicators will be installed at two key locations along the circuit to identify where "unknown" MEs may be occurring. This will help determine why the events occur and enable an appropriate remedy to be applied.

WEST TOWNE (WTN) 1320

CAUSE	SAIFI	ME
Cable failures	0.204	4.0
Equipment failures	0.020	0.0
Storm-related	0.016	1.0
Substations	0.000	0.0
Tree-related	0.002	0.0
Wildlife-related	0.016	2.0
Other	0.034	1.0
TOTAL	0.292	8.0

For the MEs, a pattern cable failures have increased on a portion of this circuit recently.

Cable replacement will be done in the area southeast of the intersection of Schroeder and Gammon roads. Cable testing will be done in the area around Brittany Place, with cable replaced as found to be necessary.

SHOREWOOD (SHW) 434

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	2.0
Substations	0.000	0.0
Tree-related	0.000	2.0
Wildlife-related	0.000	0.0
Other	0.000	4.0
TOTAL	0.000	8.0

All of the MEs on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit (see parent circuit WLT 1321 in this report).

No action is planned on this circuit.

SPRECHER (SPR) 1334

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.120	2.0
Storm-related	0.005	1.0
Substations	0.000	0.0
Tree-related	0.006	0.0
Wildlife-related	0.015	0.0
Other	1.351	2.0
TOTAL	2.497	5.0

The two whole-circuit outages had different causes. One was due to MGE construction activity (Other) and the other was due to a pole failure (Equipment failures). For the MEs, a pattern of wildlife contacts on a portion of this circuit has been noted over the past several years, and nearby portions of SPR 1312 and RYS 1310.

The area west of I-90/94, east of USH 51, north of Buckeye Road and south of Cottage Grove Road will have wildlife protection added to overhead equipment if it is not already installed. Also in this area, cutouts will be inspected and replaced as necessary.

WALNUT (WLT) 1322

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.293	0.0
Storm-related	0.000	0.0
Substations	2.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	0.000	4.0
TOTAL	3.293	4.0

Two of the whole-circuit outages were due to failures of the equipment in the WLT substation. This substation equipment has experienced similar failures in recent years.

In 2009 and continuing in 2010, most of the 13.8-kV substation equipment in the WLT substation will be replaced.

PHEASANT BRANCH (PHB) 1314

CAUSE	SAIFI	ME
Cable failures	0.078	3.0
Equipment failures	0.019	0.0
Storm-related	0.031	3.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.009	0.0
Other	0.140	1.0
TOTAL	0.277	7.0

For the MEs, a pattern of cable failures have increased on a portion of this circuit recently.

Late in 2008, cable replacement was done in the area south of Hillcrest Avenue where the cable failures had occurred earlier in the year.

No further action is planned on this circuit.

TOKAY (TKY) 1330

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.004	1.0
Storm-related	0.186	4.0
Substations	0.000	0.0
Tree-related	0.054	1.0
Wildlife-related	0.013	1.0
Other	0.005	0.0
TOTAL	0.262	7.0

Besides the 7 MEs in 2008, this circuit experienced 7 in 2007 and 5 in 2006. For most of these events, the location of the cause of each event was on the south portion of the circuit.

Late in 2008, a recloser was installed on Gilbert Road to prevent MEs to customers on Schroeder Road and north of the Beltline on Whitney Way.

No further action is planned on this circuit.

SPRECHER (SPR) 1336

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	1.0
Substations	0.000	0.0
Tree-related	0.175	3.0
Wildlife-related	0.006	0.0
Other	0.058	3.0
TOTAL	0.239	7.0

For the MEs, there is no clear pattern. One of the "Other" was due to vehicle contact, while two of the "Other" were unknown. All the tree-related MEs were non-preventable (not due to trees within of the rights-of-way).

No further action is planned on this circuit.

FREEPORT (FPT) 435

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.011	0.0
Storm-related	2.015	3.0
Substations	0.000	0.0
Tree-related	1.000	0.0
Wildlife-related	0.000	0.0
Other	0.034	1.0
TOTAL	3.060	4.0

The three whole-circuit outages did not have one common cause. Two outages were due to an ice storm in February, one event directly affecting the circuit and the other causing an outage to the parent 13.8-kV circuit. The tree-related outage was non-preventable (not due to trees within of the rights-of-way).

No action is planned on this circuit.

GLENWAY (GLY) 433

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.002	0.0
Storm-related	0.001	0.0
Substations	2.002	0.0
Tree-related	0.033	0.0
Wildlife-related	0.000	0.0
Other	0.000	4.0
TOTAL	3.038	4.0

The outages and MEs on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit (see parent circuit WLT 1322 in this report).

No action is planned on this circuit.

NINE SPRINGS (NSP) 1318

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.363	2.0
Storm-related	1.088	0.0
Substations	0.000	0.0
Tree-related	1.000	0.0
Wildlife-related	0.000	0.0
Other	0.000	0.0
TOTAL	2.451	2.0

The whole-circuit outages in 2008 did not have a common cause. There is no pattern of common causes over the past several years.

No action is planned on this circuit.

WALNUT (WLT) 1334

CAUSE	SAIFI	ME
Cable failures	2.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	0.0
Substations	2.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	0.000	0.0
TOTAL	4.000	0.0

Two of the whole-circuit outages were due to failures of the equipment in the WLT substation. This substation equipment has experienced similar failures in recent years. The other two whole-circuit outages were due to cable dig-ins.

In 2009 and continuing in 2010, most of the 13.8-kV substation equipment in the WLT substation will be replaced.

BLOUNT (BLD) 1304

CAUSE	SAIFI	ME
Cable failures	0.875	0.0
Equipment failures	1.998	0.0
Storm-related	0.001	0.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.036	1.0
Other	0.000	0.0
TOTAL	2.910	1.0

The two whole-circuit outages were due to splice failures. The splices have been replaced.

No action is planned on this circuit.

WALNUT (WLT) 1314

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.003	0.0
Storm-related	0.000	0.0
Substations	2.757	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	0.000	0.0
TOTAL	3.760	0.0

Two of the whole-circuit outages were due to failures of the equipment in the WLT substation. This substation equipment has experienced similar failures in recent years.

In 2009 and continuing in 2010, most of the 13.8-kV substation equipment in the WLT substation will be replaced.

WEST CAMPUS (WCA) 432

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	3.689	0.0
TOTAL	3.689	0.0

The outages on this 4-kV circuit were due to one event (line construction activity) when the circuit was also temporarily serving the customers normally served by an adjacent circuit. This affected 867 customers instead of the 235 customers normally on this circuit.

No action is planned on this circuit.

UNIVERSITY HILL FARMS (UHF) 451

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	2.041	0.0
Storm-related	0.000	0.0
Substations	1.000	0.0
Tree-related	0.127	0.0
Wildlife-related	0.000	0.0
Other	0.000	0.0
TOTAL	3.168	0.0

The whole-circuit outages in 2008 did not have a common cause. One was due to an outage of the parent 13.8-kV circuit (BLK 1335), one was due to an arrester failure, and one was due to a transformer failure. There is no pattern of common causes over the past several years.

No action is planned on this circuit.

PSC 113.0604 (2)(d) – Status of Response Plans Filed in the Prior Report

This section will report the status of improvements proposed in the 2008 report but not completed as of the filing of this 2009 report.

Huiskamp 1307 SAIFI = 2.491, ME = 8.14 (2007)
To reduce ME due to cutouts in the Northport Drive / Mandrake Road area, cutouts have been inspected and replaced as necessary. To reduce ME due to wildlife in this area, wildlife protection was added at transformer locations in conjunction with cutout replacements. At transformer locations where cutouts were not replaced, wildlife protection will be added by July 2009.

West Middleton 1332 SAIFI = 2.016, ME = 0.00 (2007)
To reduce SAIFI, distribution automation of this circuit was considered. Upon investigation, however, it was determined that this circuit was not a good candidate due to the complex configuration of the circuits in this area and the heavy loads on those circuits. In 2008, the SAIFI for WMD 1332 was 0.034.

PSC 113.0604 (2)(e) – New or Modified Power Quality or Reliability Programs

MGE continues to implement our program to install additional wildlife barriers on our overhead gang-operated switches. This program, started in 2007, will require five years to complete.

MGE continues to install additional monitoring equipment on most three-phase recloser installations throughout the system. The monitoring equipment will improve our ability to diagnose system disturbances as well as improve our ability to respond to them.

MGE continues a program that focuses on improving reliability to those customers who have experienced the most service interruptions. Customers Experiencing Multiple Interruptions (CEMI) is an index we use that measures the number of times every customer has had an outage, for a rolling year.

MGE experienced a number of customer outages over the past couple years due to cutout failures. The cutouts fail due to poor manufacturing practices several years ago of a particular brand. The cutout holds a fuse that operates to isolate a faulted downstream section of the feeder, but the failures can cause an outage to customers upstream of the cutout as well. To address this, MGE initiated a program in 2007 of replacing existing cutouts of the brand that fails with those of other manufacturers, until all are replaced.

PSC 113.0604 (2)(f) – Long-Range Electric Distribution Plan

Overview
MGE performs long-range electric distribution system planning to assure that the capacity and voltage of the system will be adequate for normal and contingency conditions. The plans are based on forecasts of future population growth, facility loads, voltages, and expected customer use. In addition, distribution improvements are planned to increase reliability in specific areas and to replace facilities that are at the end of their practical service life. The results of the analysis are proposed projects and facilities in the MGE ten-year electric distribution plan. These plans are updated annually. See the tables below for the projects and facilities for substations and feeders that are proposed over the next ten years.

Substations
Over the next several years, MGE is planning to add new substations around the periphery of our service territory and to upgrade existing substations as well.

As 4-to-14 kV feeder conversions occur and eliminate the need for 14/4-kV or 69/4-kV transformers and substations, those substations will be removed.

Item	Substation Project	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Walnut: Replace 14 kV Eqpmt and Add Trfmr #3	XX									
2	Blount Spot Network: Add 69/14 kV Trfmr #3		XX								
3	Femrite: Replace Trfrmr #4 & Add Switchgear		XX								
4	Blackhawk: Add 69/14 kV Trfmr #2			XX							
5	American: Add 138/14 kV Trfmr #2				XX						
6	West Middleton: Replace Trfmr #7					XX					
7	Femrite: Replace Trfrmr #3					XX					
8	Future Distribution Substations						XX	XX	XX	XX	XX

Feeders
Improvements to feeders include new and rebuilt lines. New feeders include new lines from existing substations, extensions of existing lines, and reconfigurations of existing lines to create new feeders for a new substation. Rebuilt feeders are due to 4-to-14 kV feeder conversions or projects specifically intended to address age/condition of the feeders.

Voltage conversions are due to loads, voltages, age/condition of 14/4-kV transformers, age/condition of poles/wires, or to vacate substation space for 69/14-kV transformer additions. Projects due to load growth are to serve new load throughout the MGE service territory, to tie feeders at new locations to allow better switching during contingencies, or to reconfigure the feeders because of new substations. Improving reliability is also a reason for feeder projects.

To increase reliability, MGE continues to aggressively replace underground cables to avoid faults in cables that are reaching the end of their useful life. Cable made after 1978 is less prone to fail, and the continuation or modification of this program for vintages after 1978 is annually reviewed.

Several of the feeder projects are proposed to increase reliability. Conversion projects include pole and conductor replacements, which will increase service reliability. Feeders will be reconductored or converted from overhead to underground to improve their performance. New and reconfigured feeders related to substation improvements will also increase reliability.

Item	Feeder Project	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	System Improvements from PSC 113	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
2	Distribution Automation	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
3	DLM: Distribution Communication Equipment	XX		XX		XX	XX	XX	XX	XX	XX
4	Distribution Feeder Capacitors	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
5	OH-to-UG: Fch, Mdsn, Mdtn, Mon, Shwd	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
6	4-to-14 kV Conversion: S. Madison – North Area	XX									
7	4-to-14 kV Conversion: Glenway 433 (partial)	XX									
8	4-to-14 kV Conversion: Blount 4 kV Radial	XX									
9	4-to-14 kV Conversion: Mendota		XX								
10	4-to-14 kV Conversion: ICR 435				XX						
11	4-to-14 kV Conversion: Kipp				XX						
12	4-to-14 kV Conversion: Middleton 451				XX	XX					
13	4-to-14 kV Conversion: Fair Oaks - North					XX					
14	4-to-14 kV Conversion: Prairie					XX	XX				
15	4-to-14 kV Conversion: Freeport - South						XX				
16	4-to-14 kV Conversion: future years							XX	XX	XX	XX
17	4 kV Feeder Improvements	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
18	Distribution Cable Replacements	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
19	Upgrade: West Middleton 1334	XX									
20	Reconductor: Portion of ETN 1332	XX									
21	New AMN-ETN tie feeder		XX								
22	Nakoma OH Wire Replacement		XX								
23	Future Feeder Reinforcements		XX	XX	XX	XX	XX	XX	XX	XX	XX
24	Fdr Getaway/Cutover for New Subs or Trfmrs	XX	XX	XX	XX	XX					
25	Low-Voltage Network System Improvements	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX

PSC 113.0604 (3)(a) – Miles of Distribution Line Rebuilt

This total includes conversion from overhead to underground, 4-to-14 kV voltage conversions, cable replacements, or overhead relocations. Two-phase distribution rebuilt is shown as two single-phase lines.

Miles of Distribution Line Rebuilt for 2008

Overhead		Underground	
Single Phase	Three Phase	Single Phase	Three Phase
3.7	6.0	9.6	8.6

PSC 113.0604 (3)(b) – Miles of Line in Service by Voltage Level

Distribution Circuit Lengths in Service for 2008

	OH Footage	OH Miles	UG Footage	UG Miles
4.1 kV	1,250,653	236.9	365,599	69.2
13.8 kV	3,591,925	680.3	5,044,896	955.5
Totals		917.2		1,024.7
Note: These numbers may differ slightly from those in the MGE annual report.				

PSC 113.0604 (3)(c) – Speed of Answer in Seconds

Average Speed of Answer in Seconds for 2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Gas Leak	16	14	16	17	15	18	16	14	19	20	19	26
Emergency/Outage	25	39	29	18	21	60	35	20	69	24	31	30
Billing	20	20	41	36	37	35	35	29	34	44	35	45

PSC 113.0604 (3)(d) – Service Time

MGE customers are allowed to choose one of two options for scheduling service installs.

The first option is to work with us through the construction process and plan toward a specific installation date. MGE will work with these customers to make sure service installation can be completed when they request it. This is a continuation of the process we have been using for all customers for the past several years. In these cases the "Date Needed" in the table below is supplied by the customer.

The second option allows customers to simply apply for service. When everything is ready for service, they mail or fax a card to MGE and we will install the service within three weeks of receiving the card. We have discovered over time that some builders would rather not have us calling them for updates. This option will appeal to these customers. While we were considering this option, we heard from builders who strongly prefer this model. In this case, the "Date Needed" in the table below will be set at three weeks after we are notified the customer is ready for service.

MGE encourages our customers to contact MGE very early in the process of building or remodeling. As a result, MGE often works with a customer for a long time before their new service is installed. To track our effectiveness, we measure the time between the customer's requested service date and the date MGE energizes the service. It is our intention and belief that by working with the customer cooperatively as construction on their facility progresses, we can assure the highest customer satisfaction.

The table below provides the average number of days between the customer-requested date (Date Needed) to the date the new service is energized for residential, commercial, and multi-unit projects, for 2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential												
No. of Days	41	22	10	15	1	-6	18	-3	-3	0	-3	-2
No. of Orders	41	12	22	17	22	19	21	28	19	27	18	18
Commercial												
No. of Days	6	0	0	0	0	10	4	0	0	2	0	0
No. of Orders	10	12	7	20	17	30	32	40	29	32	30	19
Multi-Units												
No. of Days	10	0	-1	0	0	-2	-1	-8	-2	11	-1	0
No. of Orders	3	0	1	1	3	7	2	2	3	1	1	2

PSC 113.0604 (3)(e) – Total Complaints

The following table shows the total complaints (written and telephone) by category and month for 2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
High Bill Investigations/ Complaints - Electric	215	146	144	53	46	77	128	145	212	107	54	91	1418
High Bill Investigations/ Complaints - Gas	104	75	78	44	28	36	59	41	35	12	11	47	570
High Bill Investigations/ Complaints - Both	66	79	62	32	35	33	46	34	54	29	20	32	522
Payment Arrangements	0	0	0	0	0	0	0	0	0	0	0	0	0
Late Payment Charges – Gas and Electric	3	0	2	4	3	1	1	0	0	0	3	0	17
Disconnection of Service	0	0	1	9	15	12	12	3	6	13	3	2	76
Quality/Timeliness of Job or Service	2	0	0	0	1	0	0	0	1	1	0	1	6
Rates/Electric Surcharge	1	2	4	3	1	1	0	0	3	1	0	1	17
Miscellaneous	20	12	13	11	12	16	22	25	29	33	21	17	231
Safety	0	0	0	0	0	0	0	0	0	0	0	0	0
Outages	0	0	0	0	0	0	0	0	0	0	0	0	0
Power Quality	0	1	0	1	0	0	0	0	1	2	0	0	5
Property Damage	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	411	315	304	157	141	176	268	248	341	198	112	191	2862

PSC 113.0604 (3)(f) – Total Tree Trimming Budget and Actual Expenses

Category	Description	2008 Budget	2008 Actual
632-2359	Misc./Emergency	$156,274	$222,634
632-2360	Routine maintenance	$1,626,342	$2,067,118
Totals		$1,782,616	$2,289,752
N/A	Job Orders	N/A	$57,605

PSC 113.0604 (3)(g) - Total Annual Projected and Actual Circuit Miles of Distribution Line Trees Trimmed

Circuit Miles of Line Clearance Planned in 2008: 173.1 miles
Circuit Miles of Line Clearance Completed in 2008: 184.9 miles

Madison Gas and Electric Company
P.O. Box 1231
Madison, WI 53701-1231
608-252-7000

your community energy company

April 29, 2011

Via Electronic Regulatory Filing

Gas and Energy Division
Public Service Commission of Wisconsin
Post Office Box 7854
Madison, Wisconsin 53707-7854

Subject: MGE's 2010 Annual Reliability Performance Report - Docket 05-GF-113

Attached is Madison Gas and Electric Company's Annual Reliability Performance Report per Wis. Admin. Code § PSC 113.0604.

The report contains responses to:

- PSC 113.0604(2)(a) Overall MGE System Reliability
- PSC 113.0604(2)(b)(c) Worst-Performing Circuits
- PSC 113.0604(2)(d) Status of Response Plans Filed in the Prior Report
- PSC 113.0604(2)(e) New or Modified Power Quality or Reliability Programs
- PSC 113.0604(2)(f) Long-Range Electric Distribution Plan
- PSC 113.0604(3)(a) Miles of Distribution Line Rebuilt
- PSC 113.0604(3)(b) Miles of Line in Service by Voltage Level
- PSC 113.0604(3)(c) Speed of Answer in Seconds
- PSC 113.0604(3)(d) Service Time
- PSC 113.0604(3)(e) Total Complaints
- PSC 113.0604(3)(f) Total Tree Trimming Budget and Actual Expenses
- PSC 113.0604(3)(g) Total Annual Projected and Actual Circuit Miles of Distribution Line Trees Trimmed

If you have any questions, please contact me at 252-5669 or at gmeyer@mge.com.

Sincerely,

Gregory C. Meyer, P.E.
Director - Operations Support

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Attachment

Madison Gas and Electric Company
2010 Annual Reliability Performance Report
(PSC 113.0604)
April 2011

PSC 113.0604 (1)

The names of the Madison Gas and Electric Company (MGE) distribution feeders incorporate the name of the substation that supplies them and the voltage of the feeder. Feeders from 13.8-kV substations are given numbers in the form "13xx" while names of feeders from 4-kV substations are in the form "4xx." For example, SYC 1310 is a 13.8-kV feeder from the Sycamore substation and BLK 451 is a 4-kV feeder from the Blackhawk substation.

PSC 113.0604 (2)(a) – Overall MGE System Reliability

MGE operates in a single area in Dane County for the electric distribution system. The chart below shows our SAIFI, SAIDI, and CAIDI statistics for 2009 and 2010.

Year	Customers	Customers Out	Customer Minutes	SAIFI	SAIDI (minutes)	CAIDI (minutes)
2009	139,406	87,356	7,542,456	0.63	54.1	86.3
2010	140,181	82,817	8,404,412	0.59	60.0	101.5

Facilities Owned by Others
On June 23, 2010, an outage of the Sycamore 69-kV Bus 1 owned by American Transmission Company (ATC) caused 5,493 MGE customers to experience service outages. The bus outage occurred during a storm. The chart below shows our SAIFI, SAIDI, and CAIDI statistics for 2010, excluding this event.

Year	Customers	Customers Out	Customer Minutes	SAIFI	SAIDI (minutes)	CAIDI (minutes)
2010	140,181	77,324	8,168,128	0.55	58.3	105.6

PSC 113.0604 (2)(b)(c) – Worst-Performing Circuits

The MGE distribution circuits that are the highest priority based on SAIFI and momentary events (ME) in 2010 are shown in the table below. MGE selects the circuits based on SAIFI, starting with the highest and moving down until a gap occurs in the SAIFI values near ten circuits. In addition, MGE selects circuits based on the number of ME experienced, starting with the highest and moving down until a gap occurs in the ME totals between five and ten circuits. Some circuits may have high SAIFI and high ME, and fall into both categories. MGE has identified 18 worst-performing circuits for 2010.

MGE uses SAIFI and ME to identify circuits that are likely to need reliability improvement and places less emphasis on SAIDI and CAIDI. This is because when customers experience an interruption, most of the inconvenience is present regardless of the duration. Very long outage durations are unusual, so focusing on minimizing interruptions offers the greatest benefit to customer satisfaction.

Customers may experience momentary service interruptions when wildlife or trees briefly contact the equipment on the electric distribution system. The purpose of momentarily tripping and reclosing the feeder is to allow temporary faults to clear and avoid any customer outages. When the fault is permanent, the momentary trip and reclose will not clear the fault and another protective action will occur. Permanent faults on taps off the main trunk will cause a fuse to blow; permanent faults on the main feeder trunk will cause an infield recloser or a feeder breaker to lock open.

Circuit	SAIFI	Momentary Events*
BLD 1303	2.60	1.00
BLK 432	2.10	4.00
CSP 1336	0.09	7.00
HKP 1312	1.09	8.00
MIL 444	3.29	5.00
MON 443	1.09	6.00
NSP 1309	1.21	6.00
NSP 1319	0.11	6.00
PHB 1318	2.06	5.00
RYS 1312	2.02	5.00
SHW 434	3.10	3.00
SPR 1321	0.31	7.00
SPR 1334	0.22	7.00
SYC 1334	2.28	3.00
WCA 434	2.00	0.00
WGA 1316	0.14	6.00
WLT 1321	2.01	2.00
WMD 1334	2.05	2.28

* Momentary Events refer to service interruptions occurring for less than five minutes. This may include more than one recloser cycle. Infield recloser operations that affect only a portion of the customers on a circuit account for any decimals.

BLOUNT (BLD) 1303

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.567	0.0
Storm-related	0.818	0.0
Substations	0.000	0.0
Tree-related	0.022	0.0
Wildlife-related	0.049	0.0
Other	1.147	1.0
TOTAL	**2.603**	**1.0**

Two whole-circuit outages were initiated due to wildlife contact downstream of fuses, but extended to the whole circuit due to miscoordinated fuses. A third whole-circuit outage was due to lightning during a storm.

Fuse coordination on the circuit was reviewed and revised. No further action is planned on this circuit.

BLACKHAWK (BLK) 432

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.016	0.0
Storm-related	0.000	2.0
Substations	0.000	0.0
Tree-related	2.083	2.0
Wildlife-related	0.000	0.0
Other	0.001	0.0
TOTAL	**2.100**	**4.0**

Two whole-circuit outages were due to trees or limbs that were outside of the trimming zone.

Additional fusing in heavily wooded areas will be installed to reduce the extent of any future outages.

CROSS PLAINS (CSP) 1336

CAUSE	SAIFI	ME
Cable failures	0.031	1.0
Equipment failures	0.018	2.0
Storm-related	0.008	3.0
Substations	0.000	0.0
Tree-related	0.015	0.0
Wildlife-related	0.010	0.0
Other	0.008	1.0
TOTAL	**0.090**	**7.0**

Three of the momentary events on this circuit were during storms and two were due to conductors contacting each other during high-wind conditions.

Grounding and arresters will be checked on the circuit and improved, replaced or upgraded where necessary. The spacing between phases will be checked in the Pine Hill Road area and corrected as necessary.

HUISKAMP (HKP) 1312

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.011	3.0
Storm-related	1.011	4.0
Substations	0.000	0.0
Tree-related	0.053	1.0
Wildlife-related	0.013	0.0
Other	0.000	0.0
TOTAL	**1.088**	**8.0**

Four of the momentary events on this circuit were during storms and three were due to failures of different types of equipment (insulator, cutout, switch).

Grounding and arresters will be checked on the circuit and improved, replaced or upgraded where necessary.

MILWAUKEE (MIL) 444

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.000	0.0
Storm-related	1.000	4.0
Substations	0.000	0.0
Tree-related	1.287	0.0
Wildlife-related	0.000	0.0
Other	0.000	1.0
TOTAL	**3.287**	**5.0**

Two of the outages on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit, RYS 1312. Other outages were mainly due to trees or limbs that were outside of the trimming zone.

No further action is planned on this circuit.

MONONA (MON) 443

CAUSE	SAIFI	ME
Cable failures	0.000	3.0
Equipment failures	0.000	0.0
Storm-related	0.000	1.0
Substations	1.000	0.0
Tree-related	0.089	0.0
Wildlife-related	0.000	0.0
Other	0.000	2.0
TOTAL	**1.089**	**6.0**

The momentary events on this 4-kV circuit were due to disturbances on the parent 13.8-kV circuit, NSP 1309.

In 2010, auto-transfer switches were installed on the parent circuits of MON 443 and MON 444 so an outage of a 13.8-kV parent circuit would avoid a sustained outage of its 4-kV child circuit. No further action is planned on this circuit. No further action is planned on the parent circuit; see NSP 1309.

NINE SPRINGS (NSP) 1309

CAUSE	SAIFI	ME
Cable failures	0.381	3.0
Equipment failures	0.094	0.0
Storm-related	0.000	1.0
Substations	0.452	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	0.280	2.0
TOTAL	**1.207**	**6.0**

The dominant cause for the momentary events on this circuit was failure of underground cables.

About 5400 feet of underground cable was replaced on this circuit from 2001 through 2009 and about 6000 feet of cable was replaced in 2010. No further action is planned on this circuit.

NINE SPRINGS (NSP) 1319

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.012	0.0
Storm-related	0.025	1.0
Substations	0.000	0.0
Tree-related	0.065	1.0
Wildlife-related	0.001	1.0
Other	0.007	3.0
TOTAL	**0.110**	**6.0**

Three of the momentary events on this circuit were due to unknown causes. The other three momentary events each had different causes.

No further action is planned on this circuit.

PHEASANT BRANCH (PHB) 1318

CAUSE	SAIFI	ME
Cable failures	0.027	3.0
Equipment failures	0.030	1.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.000	0.0
Other	2.003	1.0
TOTAL	**2.060**	**5.0**

One whole-circuit outage on this circuit was due to a dig-in on a cable and another outage occurred during construction activity by a MGE contractor.

About 1,700 feet of underground cable was replaced on this circuit in 2010, and cable replacement will continue in 2011.

ROYSTER (RYS) 1312

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	1.000	0.0
Storm-related	1.000	4.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.019	0.0
Other	0.000	1.0
TOTAL	**2.019**	**5.0**

One whole-circuit outage was due to an arrester failure; a MGE line crew was working on the circuit at the time so it was set to not reclose when the arrester failed. The other whole-circuit outage occurred during a storm. Four of the five momentary events occurred during storms.

Arresters and grounding on this circuit will be checked and upgraded as needed to address momentary events. There is not a pattern of causes for outages, so no consequent action is planned on this circuit to address SAIFI.

SHOREWOOD (SHW) 434

CAUSE	SAIFI	ME
Cable failures	0.000	1.0
Equipment failures	0.000	0.0
Storm-related	0.000	1.0
Substations	0.000	0.0
Tree-related	1.083	0.0
Wildlife-related	2.000	0.0
Other	0.014	1.0
TOTAL	**3.097**	**3.0**

One whole-circuit outage was due to trees or limbs that were outside of the trimming zone, and two other outages were caused by wildlife contact in the same switchgear.

Additional fusing will be installed to reduce the extent of any future outages due to trees. The switchgear with wildlife issues will be replaced with a type that is more wildlife resistant. In 2010, auto-transfer switches were installed on the parent circuits of SHW 432 and SHW 434 so an outage of a 13.8-kV parent circuit would avoid a sustained outage of its 4-kV child circuit.

SPRECHER (SPR) 1321

CAUSE	SAIFI	ME
Cable failures	0.013	2.0
Equipment failures	0.043	1.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.205	2.0
Wildlife-related	0.024	0.0
Other	0.024	2.0
TOTAL	**0.309**	**7.0**

There is not a clear pattern of causes for the momentary events on this circuit, since five were due to three different causes and two were due to unknown causes.

In 2009 and 2010, half of this circuit had cutouts inspected and replaced as well as wildlife protection added where needed. No further action is planned on this circuit.

SPRECHER (SPR) 1334

CAUSE	SAIFI	ME
Cable failures	0.213	4.0
Equipment failures	0.001	0.0
Storm-related	0.003	2.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.001	1.0
Other	0.000	0.0
TOTAL	**0.218**	**7.0**

Four of the momentary events on this circuit were due to failure of underground cables, three of which were in the Brookshire Lane area in June, August and September.

About 4,500 feet of cable in the Brookshire Lane area was replaced in the last quarter of 2010, and about 38,500 feet of cable was replaced on this circuit from 2000 through 2009. Cable replacement will continue in 2011.

SYCAMORE (SYC) 1334

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.001	0.0
Storm-related	0.000	1.0
Substations	0.000	0.0
Tree-related	0.172	2.0
Wildlife-related	1.053	0.0
Other	1.055	0.0
TOTAL	**2.281**	**3.0**

One whole-circuit outage was due to wildlife contact on the circuit and one was due to the June 23, 2010, transmission outage.

Wildlife contact and cutout failures have been recurring problems in recent years on parts of this circuit. To address these issues, wildlife protection will be added to overhead equipment if it is not already installed and cutouts will be inspected and replaced as necessary, concentrating on the MacArthur Road area.

WEST CAMPUS (WCA) 434

CAUSE	SAIFI	ME
Cable failures	0.000	0.0
Equipment failures	0.002	0.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	2.000	0.0
Other	0.000	0.0
TOTAL	**2.002**	**0.0**

Both whole-circuit outages were caused by wildlife contact inside the same switchgear on the parent circuit, WLT 1321.

See WLT 1321 for the corrective action to be taken.

No further action is planned on this circuit.

WINGRA (WGA) 1316

CAUSE	SAIFI	ME
Cable failures	0.000	1.0
Equipment failures	0.008	0.0
Storm-related	0.102	0.0
Substations	0.000	0.0
Tree-related	0.010	2.0
Wildlife-related	0.014	0.0
Other	0.010	3.0
TOTAL	**0.144**	**6.0**

Two momentary events on this circuit were inadvertently caused during restoration efforts associated with one tree-related momentary event. In 2010, the area north of Ridgewood Way and Martin St and south of West Lakeside St had wildlife protection added to overhead equipment and cutouts were inspected and replaced.

No further action is planned on this circuit.

WALNUT (WLT) 1321

CAUSE	SAIFI	ME
Cable failures	0.008	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	1.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	2.000	0.0
Other	0.000	1.0
TOTAL	**2.008**	**2.0**

Both whole-circuit outages were caused by wildlife contact inside the same switchgear.

The switchgear will be replaced with a type that should prevent wildlife from being able to contact energized parts inside the switchgear.

WEST MIDDLETON (WMD) 1334

CAUSE	SAIFI	0.54
Cable failures	0.267	0.00
Equipment failures	1.223	0.00
Storm-related	0.544	1.32
Substations	0.000	0.00
Tree-related	0.008	0.00
Wildlife-related	0.010	0.00
Other	0.001	0.42
TOTAL	**2.053**	**2.28**

Most of the customer outages on this circuit were due to partial-circuit outages downstream of an infield recloser, and two of these were due to conductors contacting each other during high-wind conditions.

To prevent conductors from getting too near each other, spacers have been added between phases. Additional spacers, and possibly a different type, will be evaluated for the sections of this circuit that are underbuilt on transmission structures.

PSC 113.0604 (2)(d) – Status of Response Plans Filed in the Prior Report

All the improvements proposed in the last year's report have been completed as of the filing of this report.

PSC 113.0604 (2)(e) – New or Modified Power Quality or Reliability Programs

MGE continues to implement our program to install additional wildlife barriers on our overhead gang-operated switches. This program, started in 2007, will require five years to complete.

MGE continues to install additional monitoring equipment on most three-phase recloser installations throughout the system. The monitoring equipment will improve our ability to diagnose system disturbances as well as improve our ability to respond to them.

MGE continues a program that focuses on improving reliability to those customers who have experienced the most service interruptions. The reliability improvements can include cutout replacement, tree trimming, cable replacement, and wildlife protection. Customers Experiencing Multiple Interruptions (CEMI) is an index we use that measures the number of times every customer has had an outage, for a rolling year.

MGE experienced a number of customer outages over the past couple years due to cutout failures. The cutouts fail due to poor manufacturing practices several years ago of a particular brand. The cutout holds a fuse that operates to isolate a faulted downstream section of the feeder, but the failures sometimes cause an outage to customers upstream of the cutout as well. To address this, MGE initiated a program in 2007 of replacing existing cutouts of the brand that fail with those of other manufacturers.

In 2010, auto-transfer switches (ATS) were added to 13.8-kV parent circuits that feed 4-kV child circuits, to prevent the 4-kV child circuits from experiencing a sustained outage when the 13.8-kV parent circuit has an outage. Six circuits of three 4-kV substations were completed in 2010, eleven circuits of six 4-kV substations will be completed in 2011. Additional 4-kV substations are being considered for ATS.

Wildlife contact with open air buswork in substations can cause large outages. Adding wildlife protection on the buswork has been done at various substations in the past and will continue in 2011 at Sycamore, Nine Springs and Fitchburg substations.

Substation breaker failures can also cause large outages. Because of the age, condition and failure history of substation oil circuit breakers, they are being replaced over time with vacuum circuit breakers at various substations. In the latter part of 2010 and continuing in 2011, the oil circuit breakers are being replaced with vacuum circuit breakers at Sycamore, Nine Springs and Fitchburg substations.

MGE replaced the 13.8-kV facilities at Blount and East Campus substations in recent years, and is about to begin a two-year project to replace the 13.8-kV facilities at Walnut substation. MGE routinely evaluates the replacement of 13.8-kV substation facilities and, in those evaluations, considers substation issues that have caused outages.

PSC 113.0604 (2)(f) – Long-Range Electric Distribution Plan

Overview

MGE performs long-range electric distribution system planning to assure that the capacity and voltage of the system will be adequate for normal and contingency conditions. The plans are based on forecasts of future population growth, facility loads, voltages, and expected customer use. In addition, distribution improvements are planned to increase reliability in specific areas and to replace facilities that are at the end of their practical service life. The capacity, contingency, and reliability planning efforts identify projects for the MGE ten-year electric distribution plan. These plans are updated annually.

Substations

Over the next several years, MGE is considering the addition of one or more new substations and plans upgrades to existing substations as well, to meet capacity and reliability needs.

Feeders

Capacity improvements to feeders have a positive impact on reliability. New feeders include new lines from existing substations, extensions of existing lines, and reconfigurations of existing lines to create new feeders for a new substation. Rebuilt feeders are due to 4-to-14-kV feeder conversions or projects specifically intended to address age/condition of the feeders.

Reliability benefits are gained by voltage conversions that address loads, voltages, age/condition of 14/4-kV transformers, or age/condition of poles/wires. Also contributing to reliability improvements are feeder upgrades due to load growth to serve new load, feeder extensions to create new tie points to allow better switching during contingencies, and reconfigurations for new substations that result in shorter feeders.

Some feeder projects are proposed, in part, to increase reliability. Voltage conversion projects include pole, conductor and line transformer replacements, which will increase service reliability. Feeders may be reconductored or converted from overhead to underground to improve their performance. New and reconfigured feeders related to substation improvements will also increase reliability.

Specifically to increase reliability, MGE continues to replace underground cables to avoid faults in cables that are reaching the end of their useful life. Continuation or modification of this program is annually reviewed.

Facilities that are aging or are in poor condition can detrimentally affect reliability, so the MGE ten-year electric distribution plan includes projects to address these factors. The MGE preventive maintenance program ensures that regular inspection, maintenance, and replacement is accomplished to maintain or improve reliability, for poles, overhead switches, pad-mount switchgear, elbow cabinets, pad-mount transformers, reclosers, regulators, capacitor banks, and substation equipment.

PSC 113.0604 (3)(a) – Miles of Distribution Line Rebuilt

This total includes conversion from overhead to underground, 4-to-14-kV voltage conversions, cable replacements, or overhead relocations. Two-phase distribution rebuilt is shown as two single-phase lines.

Miles of Distribution Line Rebuilt for 2010

Overhead		Underground	
Single Phase	Three Phase	Single Phase	Three Phase
8.1	5.6	11.0	14.0

PSC 113.0604 (3)(b) – Miles of Line in Service by Voltage Level

	OH Miles	UG Miles
4.1 kV	218.1	62.5
12.5 kV	41.1	60.0
13.8 kV	645.5	941.8
Totals	**904.7**	**1,064.3**

PSC 113.0604 (3)(c) – Speed of Answer in Seconds

Average Speed of Answer in Seconds for 2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Gas Leak	17	23	20	18	22	14	19	19	18	21	21	19
Emergency/Outage	40	19	70	32	54	33	55	36	37	19	21	78
Billing	33	39	56	57	60	49	43	44	66	58	32	16

PSC 113.0604 (3)(d) – Service Time

MGE customers are allowed to choose one of two options for scheduling service installs.

The first option is to work with us through the construction process and plan toward a specific installation date. MGE will work with these customers to make sure service installation can be completed when they request it. This is a continuation of the process we have been using for all customers for the past several years. In these cases the "Date Needed" in the table below is supplied by the customer.

The second option allows customers to simply apply for service. When everything is ready for service, they mail or fax a card to MGE and we will install the service within three weeks of receiving the card. We have discovered over time that some builders would rather not have us calling them for updates. This option will appeal to these customers. While we were considering this option, we heard from builders who strongly prefer this model. In this case, the "Date Needed" in the table below will be set at three weeks after we are notified the customer is ready for service.

MGE encourages our customers to contact MGE very early in the process of building or remodeling. As a result, MGE often works with a customer for a long time before their new service is installed. To track our effectiveness, we measure the time between the customer's requested service date and the date MGE energizes the service. It is our intention and belief that by working with the customer cooperatively as construction on their facility progresses, we can assure the highest customer satisfaction.

The table below provides the average number of days between the customer-requested date (Date Needed) to the date the new service is energized for residential, commercial, and multi-unit projects, for 2010. Negative (-) number of days indicates the new service was energized sooner than the Date Needed.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential												
No. of days	19	-1	5	-4	-4	-4	-4	-1	0	-3	-2	-4
No. of Orders	14	19	19	16	18	18	27	37	19	20	20	21
Commercial												
No. of days	0	4	0	0	-4	-1	5	5	4	10	8	3
No. of Orders	8	8	11	7	10	15	14	16	11	12	18	8
Multi-Units												
No. of days	-1	0	0	-9	0	0	0	0	0	-1	0	0
No. of Orders	2	0	0	1	0	0	0	0	0	1	0	0

PSC 113.0604 (3)(e) – Total Complaints

The following table shows the total complaints (written and telephone) by category and month for 2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
High Bill Investigations/ Complaints - Electric	208	104	62	64	30	47	136	219	137	97	39	85	**1228**
High Bill Investigations/ Complaints - Gas	98	47	17	18	9	5	6	11	11	5	8	39	**274**
High Bill Investigations/ Complaints - Both	81	37	16	11	7	5	7	13	16	12	2	9	**216**
Payment Arrangements	0	0	1	1	1	0	0	0	0	0	0	0	**3**
Late Payment Charges – Gas and Electric	3	0	3	3	1	1	0	0	0	0	0	1	**12**
Disconnection of Service	1	1	0	10	7	4	1	4	5	10	6		**49**
Quality/Timeliness of Job or Service	2	1	0	1	1	4	0	0	2	2	0	1	**14**
Rates/Electric Surcharge	3	1	3						1				**8**
Miscellaneous	12	15	10	7	10	16	14	14	29	19	10	9	**165**
Safety	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Outages	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Power Quality	0	0	1	0	2	0	0	0	0	0	0	0	**3**
Property Damage	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Totals	**408**	**206**	**113**	**115**	**68**	**82**	**164**	**261**	**201**	**145**	**65**	**144**	**1972**

PSC 113.0604 (3)(f) – Total Tree Trimming Budget and Actual Expenses

Category	Description	2010 Budget	2010 Actual
632-2359	Misc./Emergency	$111,743	$220,391
632-2360	Routine maintenance	1,890,267	$2,060,100
Totals		**$2,002,010**	**$2,280,491**
N/A	Job Orders		$131,559

PSC 113.0604 (3)(g) – Total Annual Projected and Actual Circuit Miles of Distribution Line Trees Trimmed

Circuit Miles of Line Clearance Planned in 2010: 159.9 miles
Circuit Miles of Line Clearance Completed in 2010: 146.1 miles

Madison Gas and Electric Company
P.O. Box 1231
Madison, WI 53701-1231
608-252-7000

your community energy company

April 30, 2013

Via Electronic Regulatory Filing

Gas and Energy Division
Public Service Commission of Wisconsin
Post Office Box 7854
Madison, Wisconsin 53707-7854

Subject: MGE 2012 Annual Reliability Report - Docket 5-GF-113

Per Wis. Admin. Code § PSC 113.0604, attached is Madison Gas and Electric Company's annual reliability performance report for 2012.

The report contains responses to:

113.0604(2)(a)	Overall MGE System Reliability
113.0604(2)(b)(c)	Worst-Performing Circuits
113.0604(2)(d)	Status of Response Plans Filed in the Prior Report
113.0604(2)(e)	New or Modified Power Quality or Reliability Programs
113.0604(2)(f)	Long-Range Electric Distribution Plan
113.0604(3)(a)	Miles of Distribution Line Rebuilt
113.0604(3)(b)	Miles of Line in Service by Voltage Level
113.0604(3)(c)	Speed of Answer in Seconds
113.0604(3)(d)	Service Time
113.0604(3)(e)	Total Complaints
113.0604(3)(f)	Total Tree Trimming Budget and Actual Expenses
113.0604(3)(g)	Total Annual Projected/Actual Circuit Miles of Distribution Line Trees Trimmed

If you have any questions, please contact me at 252-5669 or at gmeyer@mge.com.

Sincerely,

Gregory C. Meyer, P.E.
Director - Operations Support

ms

Attachment

Madison Gas and Electric Company

2012 Annual Reliability Performance Report

PSC 113.0604

April 26, 2013

PSC 113.0604(2)(a): Overall MGE System Reliability

Madison Gas and Electric Company (MGE) operates in a single area in Dane County for the electric distribution system. The chart below shows the System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), and Customer Average Interruption Duration Index (CAIDI) statistics for 2011 and 2012.

Year	Customers	Customers Out	Customer Minutes	SAIFI	SAIDI (minutes)	CAIDI (minutes)
2011	140,935	79,210	5,417,897	0.56	38.4	68.2
2012	141,585	89,196	9,473,124	0.63	66.9	106.2

Facilities owned by others

There were 6,966 MGE customers that experienced an outage on June 7, 2012, due to an event at Wingra Substation involving facilities owned by American Transmission Company (ATC) (69-kV Bus 1 and Bus 2). The chart below shows MGE's SAIFI, SAIDI, and CAIDI statistics for 2011 and 2012, excluding outages caused by ATC transmission system events (one in 2012 and five in 2011).

Year	Customers	Customers Out	Customer Minutes	SAIFI	SAIDI (minutes)	CAIDI (minutes)
2011	140,935	57,379	4,930,301	0.41	35.0	85.9
2012	141,585	82,230	9,194,484	0.58	64.9	111.8

PSC 113.0604(2)(b), (2)(c): Worst-Performing Circuits

The MGE list of worst-performing distribution circuits (2)(c) is based on two reliability indices: SAIFI and Momentary Event Annual Interruption Frequency Index ($MAIFI_E$), also described as a momentary event for the purposes of this report. When selecting circuits based on SAIFI, MGE starts with the highest SAIFI total and moves down until a significant gap occurs near ten circuits. When selecting circuits based on $MAIFI_E$, MGE starts with the highest $MAIFI_E$ total and moves down until a significant gap occurs between five and ten circuits. Some circuits with high enough SAIFI and $MAIFI_E$ may be selected due to both categories. MGE has identified 16 worst-performing circuits for 2012.

MGE uses SAIFI and $MAIFI_E$ to identify circuits needing a reliability review to maximize the benefits from improvements. MGE understands that focusing efforts on preventing outages results not only in lowering SAIFI and $MAIFI_E$ totals but also results in lower SAIDI totals by minimizing interruptions. Extended outage durations that affect SAIDI are unusual, so focusing on minimizing the number of interruptions offers the greatest benefit to customer satisfaction.

Customers may experience momentary service interruptions when foreign objects briefly contact the equipment on the electric distribution system. The purpose of momentarily tripping and reclosing a feeder is to allow temporary faults to clear and avoid any customer outages. When the fault is permanent, the momentary trip and reclose will not clear the fault and another protective action will occur. Permanent faults on taps off the main trunk will cause a fuse to blow; permanent faults on the main feeder trunk will cause an infield recloser or a feeder breaker to lock open.

Circuit	SAIFI	$MAIFI_E$*
AMN 1311	1.499	**6.10**
BLD 1304	0.195	**7.00**
BLD 1310	**2.961**	3.00
BLK 432	**2.242**	1.00
ECA 1314	**2.032**	4.00
FCH 1316	**2.250**	4.00
FEM 1306	0.095	**6.70**
GLY 432	**3.179**	**6.00**
OKG 1311	0.065	**9.40**
PFL 1304	0.098	**8.00**
SPR 1321	0.211	**6.00**
WGA 1314	**2.012**	0.00
WGA 1316	**3.472**	3.00
WGA 1319	**3.187**	5.00
WMD 1335	**2.219**	3.00
WPT 1331	**2.087**	5.00

** $MAIFI_E$ refers to service interruptions lasting for less than five minutes. This may include more than one recloser cycle. Infield recloser operations that affect only a portion of the customers on a circuit account for any decimals.*

AMERICAN (AMN) 1311:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.348	2.8
Equipment failures	1.078	0.1
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.013	0.0
Wildlife-related	0.018	1.5
Other	0.042	1.7
TOTAL	**1.499**	**6.1**

AMN 1311 experienced six momentary events in 2012, half of which were related to cable failures. MGE has scheduled the replacement of several sections of underground cable in the problem area. In late 2012, MGE implemented a fuse-blowing strategy on this circuit—the feeder breaker recloser settings were re-evaluated and optimized to prevent momentaries to customers who are "upstream" of the blown fuse.

BLOUNT DISTRIBUTION (BLD) 1304:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.000	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.181	5.0
Other	0.014	2.0
TOTAL	**0.195**	**7.0**

BLD 1304 has experienced seven momentary events in 2012, five related to wildlife. MGE is addressing this issue in 2013 with wildlife protection for the entire circuit.

BLOUNT DISTRIBUTION (BLD) 1310:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	2.023	0.0
Equipment failures	0.799	0.0
Storm-related	0.123	2.0
Substations	0.000	0.0
Tree-related	0.008	0.0
Wildlife-related	0.008	0.0
Other	0.000	1.0
TOTAL	**2.961**	**3.0**

BLD 1310 experienced two whole-circuit outages in 2012 due to cable failures. MGE replaced significant underground cable sections on this circuit in 2012 to address the issues. No further action is planned for this circuit.

BLACKHAWK (BLK) 432:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.001	0.0
Equipment failures	0.094	0.0
Storm-related	0.004	0.0
Substations	0.000	0.0
Tree-related	2.140	1.0
Wildlife-related	0.002	0.0
Other	0.001	0.0
TOTAL	**2.242**	**1.0**

BLK 432 experienced two whole-circuit outages in 2012 due to tree-related activity. These issues were addressed at the time of the outages. No further action is planned for this circuit.

EAST CAMPUS (ECA) 1314:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.030	2.0
Equipment failures	0.000	0.0
Storm-related	0.000	1.0
Substations	0.000	0.0
Tree-related	2.002	0.0
Wildlife-related	0.000	0.0
Other	0.000	1.0
TOTAL	**2.032**	**4.0**

ECA 1314 experienced two whole-circuit outages in 2012 due to tree-related activity. These issues were addressed at the time of the outages. No further action is planned for this circuit.

FITCHBURG (FCH) 1316:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.357	0.0
Equipment failures	0.002	0.0
Storm-related	0.000	2.0
Substations	0.886	0.0
Tree-related	0.000	0.0
Wildlife-related	0.005	0.0
Other	1.000	2.0
TOTAL	**2.250**	**4.0**

FCH 1316 experienced four partial-circuit outages due to underground cable failures in 2012, three of which are where cable is scheduled to be replaced in 2013. One whole-circuit outage was due to a substation breaker mis-operation; the substation breakers were replaced in 2012, and the breaker relays will be replaced in 2013. One circuit outage was due to a switching error. No further action is planned for this circuit.

FEMRITE (FEM) 1306:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.050	1.0
Equipment failures	0.036	0.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.002	0.0
Wildlife-related	0.007	2.9
Other	0.000	2.8
TOTAL	**0.095**	**6.7**

FEM 1306 experienced seven momentary events in 2012. MGE is evaluating bird protection for a few spans that have accounted for the majority of the momentary activity.

GLENWAY (GLY) 432:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.001	0.0
Equipment failures	1.002	0.0
Storm-related	0.000	3.0
Substations	0.000	0.0
Tree-related	2.176	1.0
Wildlife-related	0.000	2.0
Other	0.000	0.0
TOTAL	**3.179**	**6.0**

GLY 432 experienced two whole-circuit outages in 2012 due to tree-related damage and one whole-circuit outage due to equipment failure. These issues were addressed at the time of the outages. No further action is planned for this circuit.

OAK RIDGE (OKG) 1311:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.003	0.0
Equipment failures	0.000	0.0
Storm-related	0.000	0.7
Substations	0.000	0.0
Tree-related	0.062	1.0
Wildlife-related	0.000	0.0
Other	0.000	7.7
TOTAL	**0.065**	**9.4**

OKG 1311 experienced nine momentary events to a portion of the circuit due to a system protection issue at an in-field recloser. The system protection issue has been addressed. No further action is planned for this circuit.

PFLAUM (PFL) 1304:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.000	0.0
Equipment failures	0.051	1.0
Storm-related	0.005	3.0
Substations	0.000	0.0
Tree-related	0.000	0.0
Wildlife-related	0.033	3.0
Other	0.009	1.0
TOTAL	**0.098**	**8.0**

PFL 1304 experienced eight momentary events due to a variety of reasons. MGE is implementing a fuse-blowing strategy in 2013 to reduce the number of momentary events.

SPRECHER (SPR) 1321:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.071	3.0
Equipment failures	0.084	1.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.032	1.0
Wildlife-related	0.023	0.0
Other	0.001	1.0
TOTAL	**0.211**	**6.0**

SPR 1321 experienced six momentary events. Three were related to cable failures, so MGE has scheduled the replacement of several sections of underground cable. MGE is evaluating a fuse-blowing strategy for this circuit in 2013 to reduce the number of momentary events. Tree trimming for part of the circuit is scheduled for 2014.

WINGRA (WGA) 1314:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.000	0.0
Equipment failures	1.001	0.0
Storm-related	0.000	0.0
Substations	0.000	0.0
Tree-related	0.011	0.0
Wildlife-related	0.000	0.0
Other	1.000	0.0
TOTAL	**2.012**	**0.0**

WGA 1314 had two whole-circuit outages in 2012, one caused by a terminator failure which was addressed in response to the outage and the other due to a transmission outage event. No further action is planned for this circuit.

WINGRA (WGA) 1316:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.004	0.0
Equipment failures	0.061	0.0
Storm-related	0.324	1.0
Substations	0.000	0.0
Tree-related	0.034	1.0
Wildlife-related	0.090	1.0
Other	2.959	0.0
TOTAL	**3.472**	**3.0**

WGA 1316 experienced three whole-circuit outages in 2012, one due to the aforementioned ATC transmission system outage on June 7 and two due to construction-related activity. MGE converted some areas in 2012 from overhead to underground to reduce exposure. MGE is reconfiguring this circuit to address some remaining issues.

WINGRA (WGA) 1319:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.129	0.0
Equipment failures	1.010	0.0
Storm-related	0.010	1.0
Substations	0.000	0.0
Tree-related	0.046	0.0
Wildlife-related	0.004	0.0
Other	1.988	4.0
TOTAL	**3.187**	**5.0**

WGA 1319 experienced three whole-circuit outages during 2012, one due to a splice failure, one due to the aforementioned ATC transmission system outage on June 7, and one due to a system protection issue on an infield recloser during a switching event. No further action is planned for this circuit.

WEST MIDDLETON (WMD) 1335:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.028	0.0
Equipment failures	0.172	1.0
Storm-related	0.004	2.0
Substations	1.000	0.0
Tree-related	1.002	0.0
Wildlife-related	0.000	0.0
Other	0.013	0.0
TOTAL	**2.219**	**3.0**

WMD 1335 experienced two whole-circuit outages in 2012, one due to a recloser malfunction in the substation and one due to a tree-related outage. MGE is currently upgrading substation equipment at WMD which will replace the recloser that malfunctioned. The tree issue was addressed at the time of the outage. No further action is planned for this circuit.

WESTPORT (WPT) 1331:

CAUSE	SAIFI	$MAIFI_E$
Cable failures	0.001	0.0
Equipment failures	0.000	0.0
Storm-related	0.034	2.0
Substations	0.000	0.0
Tree-related	2.038	1.0
Wildlife-related	0.006	0.0
Other	0.008	2.0
TOTAL	**2.087**	**5.0**

WPT 1331 experienced two whole-circuit outages in 2012 due to tree-related outages. The tree issues were addressed at the time of the outage. MGE also implemented a fuse-blowing strategy in February 2012 to reduce the number of momentary events. No further action is planned for this circuit.

PSC 113.0604(2)(d): Status of Response Plans Filed in the Prior Report

All the improvements proposed in last year's report have been completed.

PSC 113.0604(2)(e): New or Modified Power Quality or Reliability Programs

MGE continues to install additional monitoring equipment on most three-phase recloser installations throughout the system. The monitoring equipment will improve our ability to diagnose system disturbances as well as improve our ability to respond to them.

MGE continues a program that focuses on improving reliability to those customers who have experienced the most service interruptions. The reliability improvements can include cutout replacement, tree trimming, cable replacement, and wildlife protection. Customers Experiencing Multiple Interruptions (CEMI) is an index we use to identify customers with the most service interruptions.

MGE has traditionally practiced a fuse-saving philosophy, where the breaker relay instantaneous trip is set to allow temporary faults to clear before line fuses can operate. This "saves" a fuse and prevents a sustained outage for a small group of customers but causes all customers on the circuit to experience a momentary interruption. MGE's new philosophy for circuits with high momentary activity is to employ a fuse-blowing strategy, where the sustained interruption for a much smaller number of customers is favored over a momentary interruption for a much larger number of customers. The ideal candidates are locations where a momentary event occurs *and* the fuse blows anyway.

In 2010, auto-transfer switches (ATS) were added to 13.8-kV parent circuits that feed 4-kV child circuits to prevent the 4-kV child circuits from experiencing a sustained outage when the 13.8-kV parent circuit has an outage. Since 2010, these installations have been completed at 13 4-kV substations, covering 28 circuits. Two additional 4-kV substations covering eight circuits will be considered in 2013.

Substation breaker relay mis-operations can also cause large outages. Three locations for replacement were chosen because of the age, condition, and failure history. New control houses, electronic relays, and control wiring will be installed to increase reliability at Sycamore, Nine Springs, and Fitchburg substations. This work has been ongoing and is scheduled for completion in 2013.

MGE completed a two-year project to replace the 13.8-kV facilities at Walnut Substation in 2012. In early 2012, MGE also retired the 4-kV Blount (1926), Mendota (1930), and South Madison (1954) substations. MGE routinely evaluates the replacement of substation facilities and, in those evaluations, considers substation issues that have caused outages.

PSC 113.0604(2)(f): Long-Range Electric Distribution Plan

Overview

MGE performs long-range electric distribution system planning to assure that the capacity and voltage of the system will be adequate for normal and contingency conditions. The plans are based on forecasts of future population growth, facility loads, voltages, and expected customer use. In addition, distribution improvements are planned to increase reliability in specific areas and to replace facilities that are at the end of their practical service life. The capacity, contingency, and reliability planning efforts identify projects for the MGE ten-year electric distribution plan. These plans are updated annually.

Substations

Over the next several years, MGE is considering the addition of one or more new substations and plans upgrades to existing substations as well to meet capacity and reliability needs.

Feeders

Capacity improvements to feeders have a positive impact on reliability. New feeders include new lines from existing substations, extensions of existing lines, and reconfigurations of existing lines to create new feeders for a new substation. Rebuilt feeders are due to 4-to-14-kV feeder conversions or projects specifically intended to address age/condition of the feeders.

Reliability benefits are gained by voltage conversions that address loads, voltages, age/condition of 14/4-kV transformers, or age/condition of poles/wires. Also contributing to reliability improvements are feeder upgrades due to load growth to serve new load, feeder extensions to create new tie points to allow better switching during contingencies, and reconfigurations for new substations that result in shorter feeders.

Specifically to increase reliability, MGE continues to replace underground cables to avoid faults in cables that are reaching the end of their useful life. Cable made after 1984 is less prone to fail, and the continuation or modification of this program for vintages before 1984 is reviewed annually.

Facilities that are aging or in poor condition can detrimentally affect reliability, so the MGE ten-year electric distribution plan includes projects to address these factors. The MGE preventative maintenance program ensures that regular inspection, maintenance, and replacement are accomplished to maintain or improve reliability, for poles, overhead switches, pad-mount switchgear, elbow cabinets, pad-mount transformers, reclosers, regulators, capacitor banks, and substation equipment.

PSC 113.0604(3)(a): Miles of Distribution Line Rebuilt

This total includes conversion from overhead to underground, 4-to-14-kV voltage conversions, cable replacements, and overhead relocations. Two-phase distribution rebuilt is shown as two single-phase lines.

Miles of Distribution Line Rebuilt for 2012			
Overhead		Underground	
Single Phase	Three Phase	Single Phase	Three Phase
3.2	3.0	3.4	9.1

PSC 113.0604(3)(b): Miles of Line in Service by Voltage Level

	OH Miles	UG Miles
4.1 kV	200.9	61.3
12.5 kV	40.8	61.1
13.8 kV	652.2	971.4
Totals	**893.9**	**1093.8**

PSC 113.0604(3)(c): Speed of Answer in Seconds

	Average Speed of Answer in Seconds for 2012											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Gas Leak	10	8	13	14	13	29	40	36	34	19	20	11
Emergency/Outage	9	22	8	40	26	65	38	45	58	28	48	10
Billing	15	16	27	32	33	45	56	47	65	50	12	12

PSC 113.0604(3)(d): Service Time

MGE customers can choose one of two options for scheduling service installations.

The first option is to identify a specific installation date early in the planning and design process. MGE works with these customers to make sure service installations can be completed on, or as near to, the customer-requested date (aka "Date Needed," see table below). In these cases, the Date Needed is supplied by the customer. Commercial, multifamily, and some residential customers generally select this option.

In the second option, the customer applies for service without specifying a specific installation date. When their site is ready for service, they mail or fax a card to MGE and the service is installed within three weeks. In this case, the "Date Needed" (see table below) will be set at 24 calendar days after we are notified the customer site is ready for service. Most residential customers utilize this option.

MGE tracks the average number of calendar days between the Date Needed to the date the service is energized. We believe our proactive communication approach toward a mutually agreed upon Date Needed provides a more accurate basis to measure customer satisfaction.

The table below provides the average number of days between the customer-requested date (Date Needed) and the date the new service is energized for residential, commercial, and multi-unit projects in 2012. A negative (-) number of days indicates the new service was energized sooner than the Date Needed.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. of days												
Residential	-2	-2	-2	-2	-2	-3	-3	0	-4	-2	-2	-2
Commercial	-3	-1	-1	-1	-6	-6	-4	0	-7	-5	0	5
Multi-Units	0	-2	0	0	0	-1	0	5	0	12	0	0

PSC 113.0604(3)(e): Total Complaints

The following table shows the total complaints (written and telephone) by category and month for 2012.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
High Bill Investigations/ Complaints - Electric	110	124	74	50	48	58	130	171	103	82	64	40	**1054**
High Bill Investigations/ Complaints - Gas	36	20	15	11	10	6	8	2	12	11	30	12	**173**
High Bill Investigations/ Complaints - Both	21	12	7	4	6	8	11	6	9	11	10	1	**106**
Payment Arrangements	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Late Payment Charges - Gas and Electric	4	1	0	0	0	0	1	0	0	0	0	0	**6**
Disconnection of Service	0	0	0	1	7	7	0	2	2	9	0	0	**28**
Quality/Timeliness of Job or Service	1	0	1	7	5	5	2	0	2	1	0	0	**24**
Rates/Electric Surcharge	0	0	1	0	2	0	1	0	1	2	0	0	**7**
Miscellaneous	5	7	1	9	9	2	19	24	24	35	23	29	**187**
Safety	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Outages	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Power Quality	0	0	2	0	3	1	0	0	0	0	1	1	**8**
Property Damage	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Totals	**177**	**164**	**101**	**82**	**90**	**87**	**172**	**205**	**153**	**151**	**128**	**83**	**1593**

PSC 113.0604(3)(f): Total Tree Trimming Budget and Actual Expenses

Category	Description	2012 Budget	2012 Actual
632-2359	Miscellaneous/Emergency	$161,743	$291,328
632-2360	Routine Maintenance	$1,670,267	$1,642,456
Totals		**$1,832,010**	**$1,933,784**
N/A	Job Orders		$146,023

PSC 113.0604(3)(g): Total Annual Projected and Actual Circuit Miles of Distribution Line Trees Trimmed

Circuit Miles of Line Clearance Planned in 2012: 208.4 miles
Circuit Miles of Line Clearance Completed in 2012: 183.3 miles