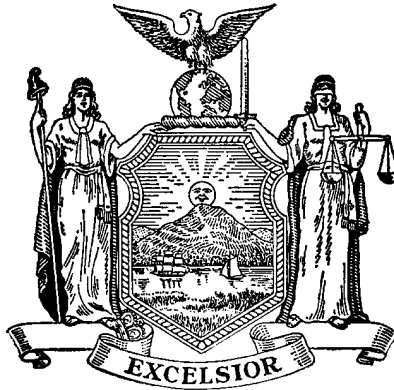


STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE



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

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 2007 Con 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 its 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

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.

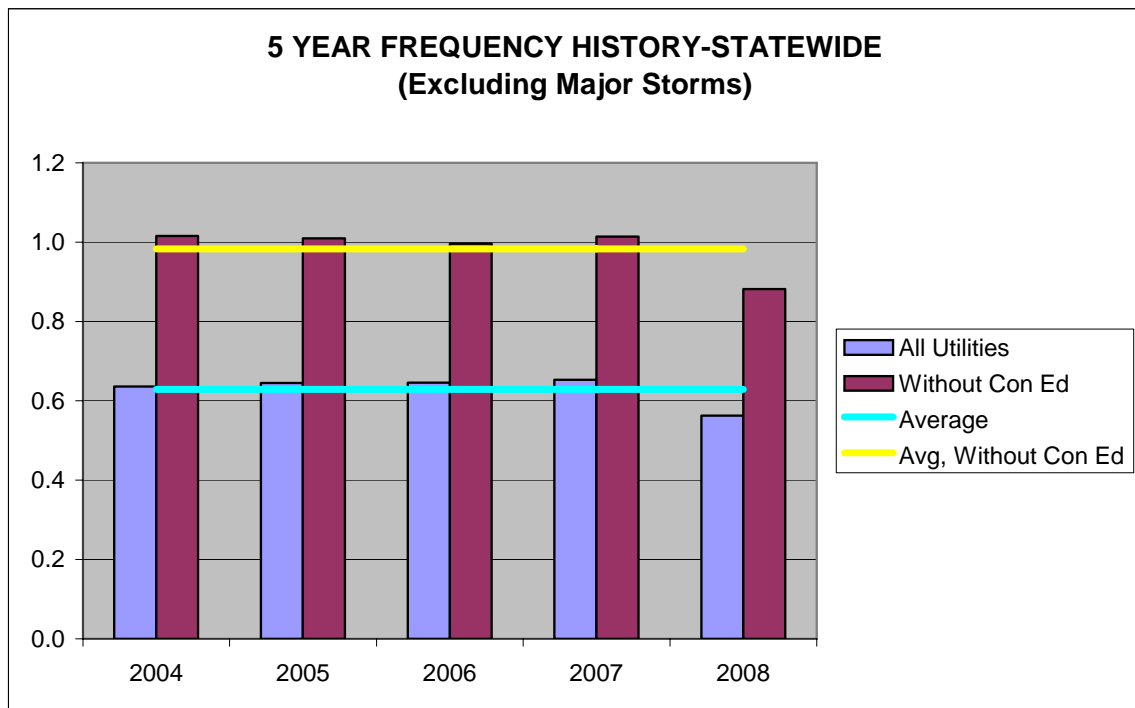


Figure 1: Statewide Frequency Performance

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.

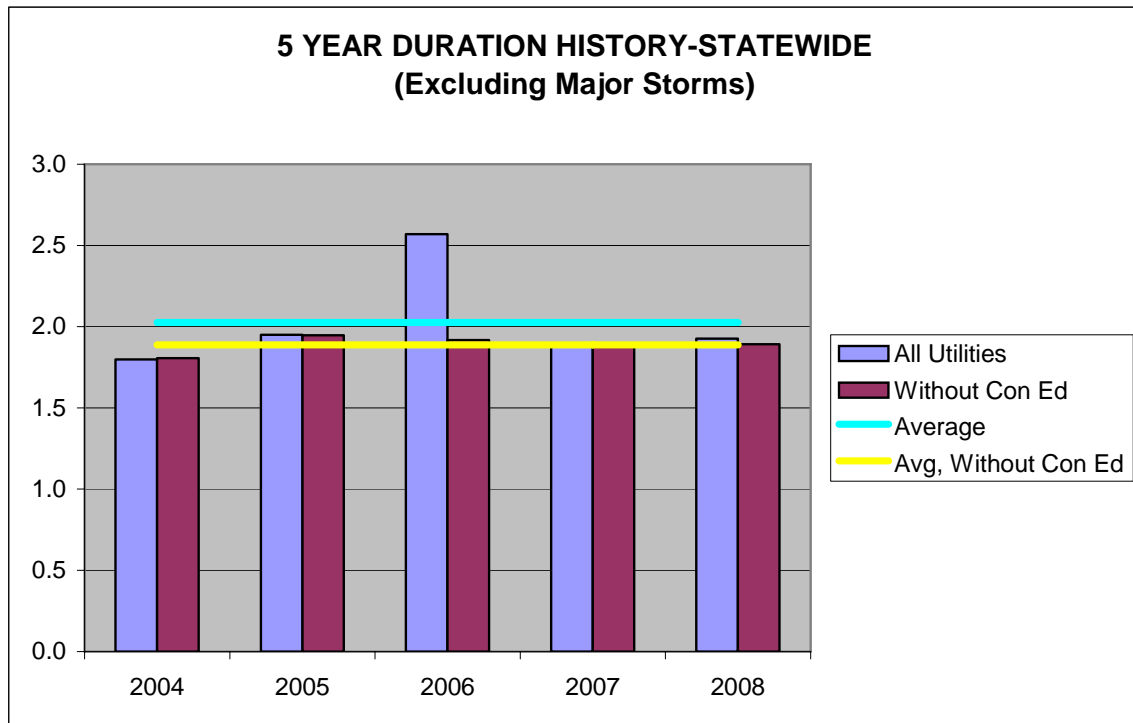


Figure 2: Statewide Duration Performance

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.

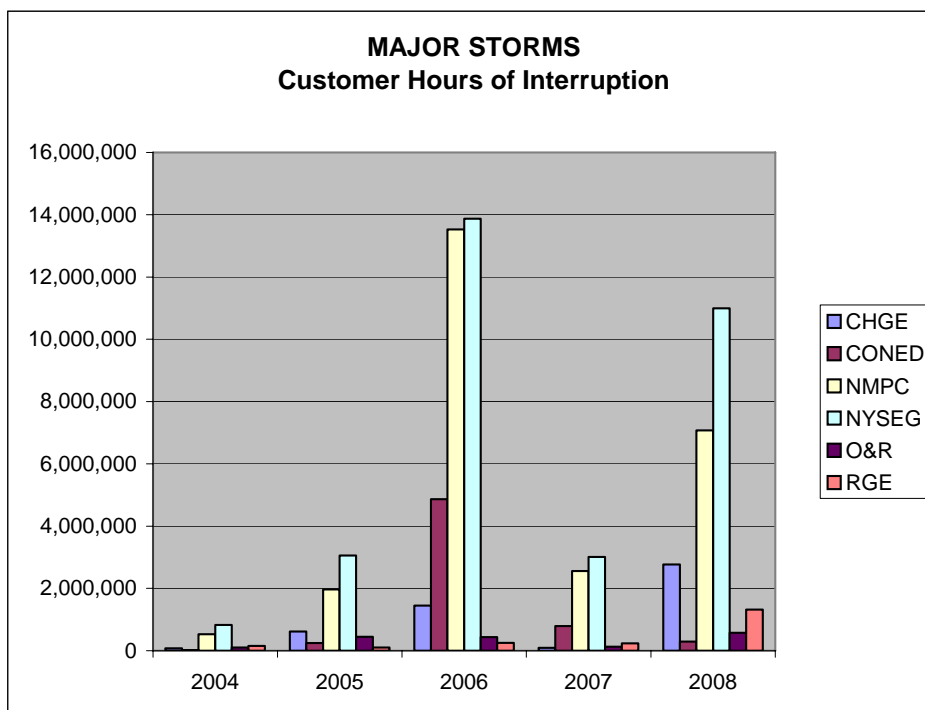


Figure 3: Major Storm Customer Hours

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%.

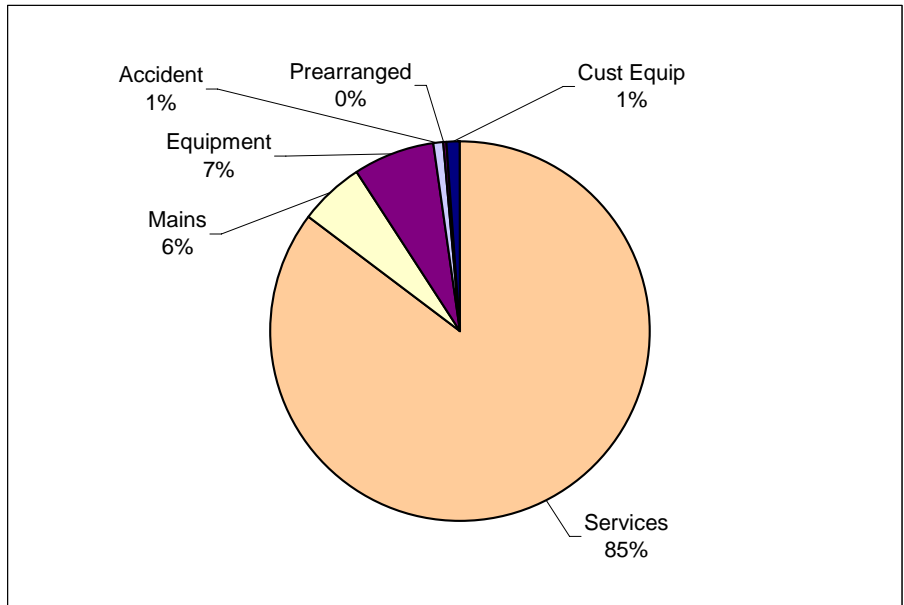


Figure 4: Con Edison's 2008 Network Interruptions by Cause

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.

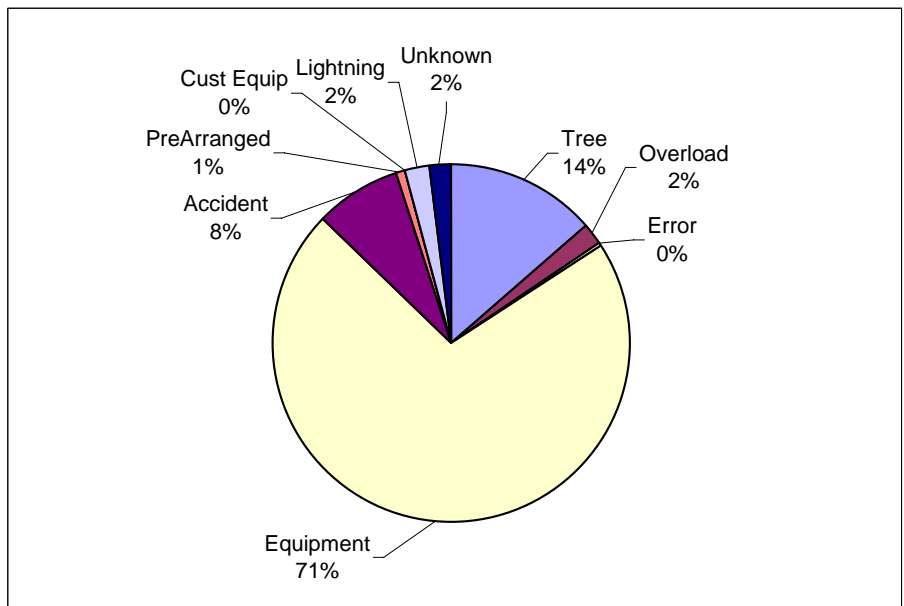


Figure 5: Con Edison's 2008 Radial Interruptions by Cause

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 its 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

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.

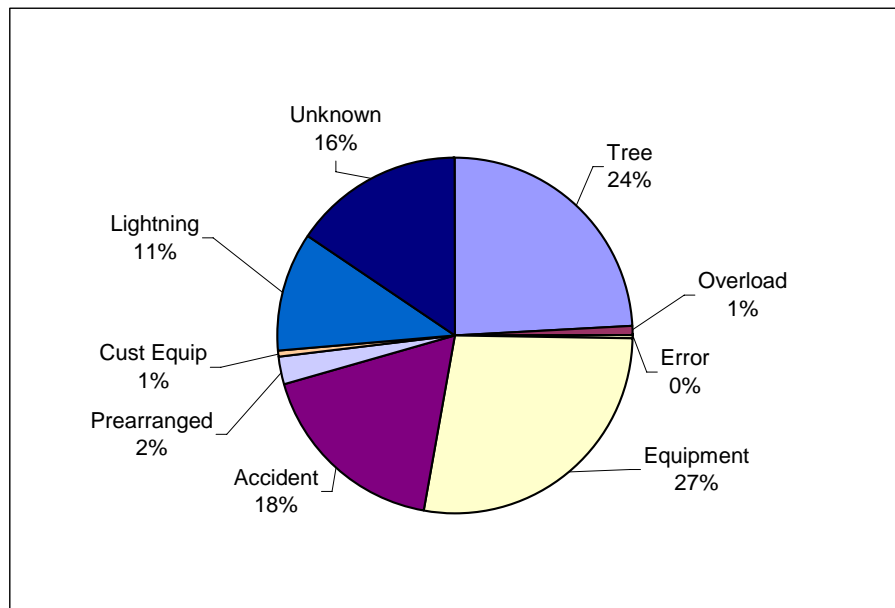


Figure 6: National Grid’s 2008 Interruptions by Cause

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 2007 decreased 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.

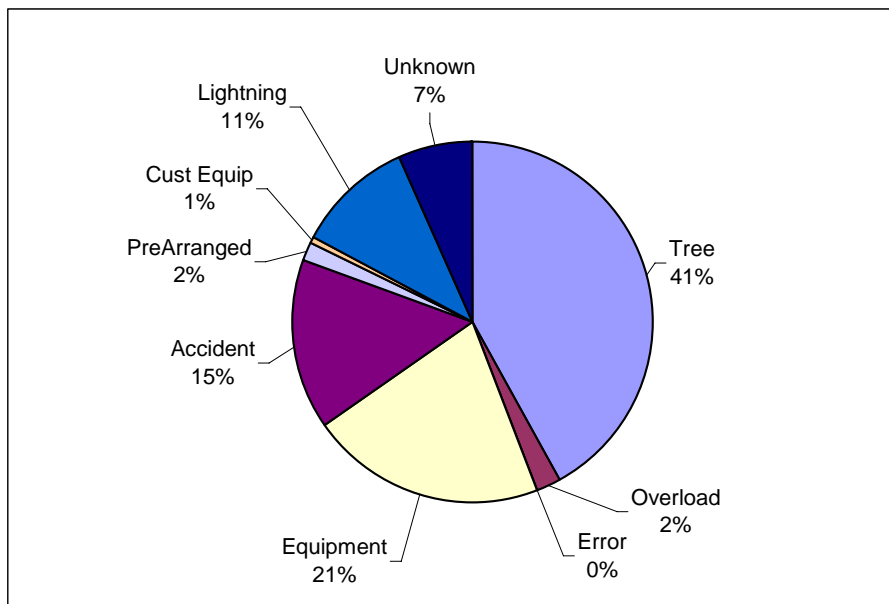


Figure 7: NYSEG’s 2008 Interruptions by Cause

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.

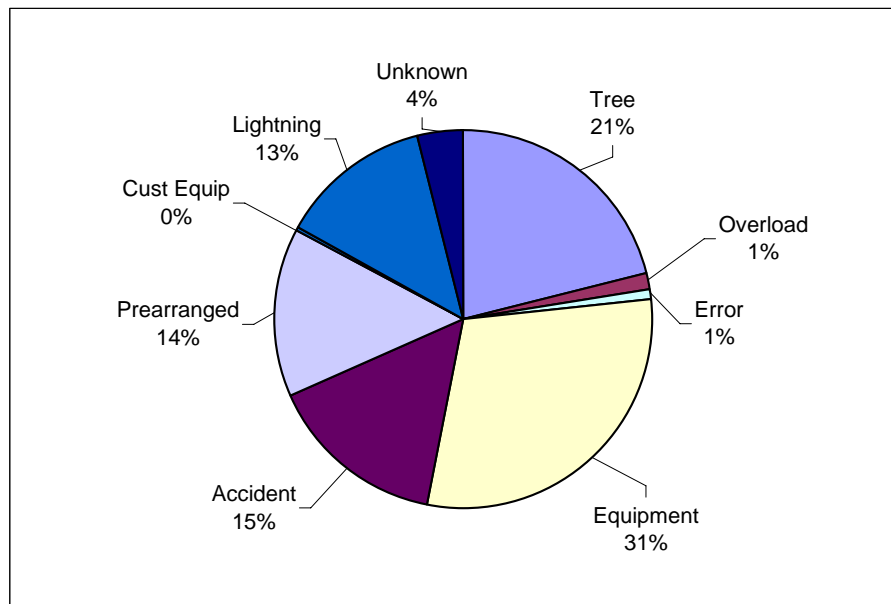


Figure 8: RG&E's 2008 Interruptions by Cause

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.

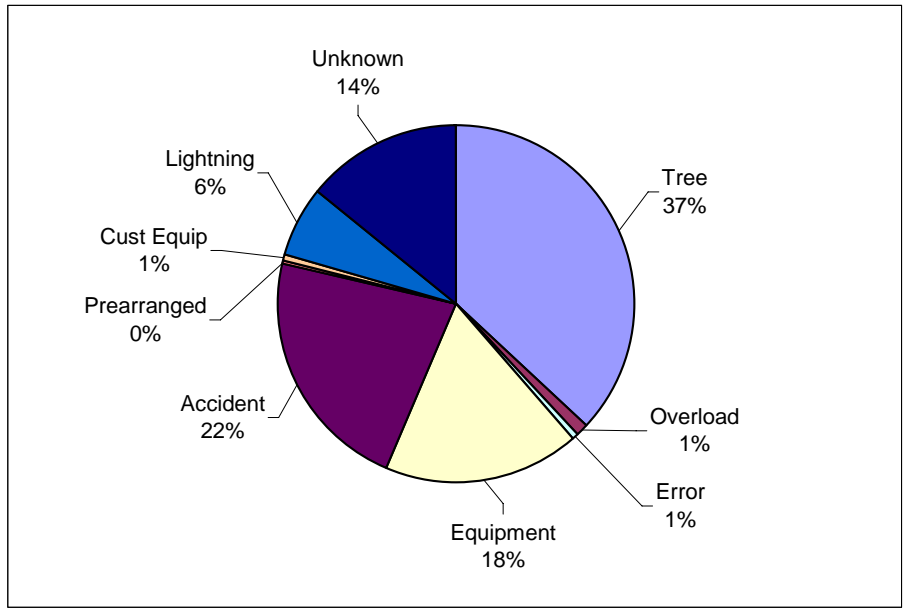


Figure 9: Central Hudson’s 2008 Interruptions by Cause

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.

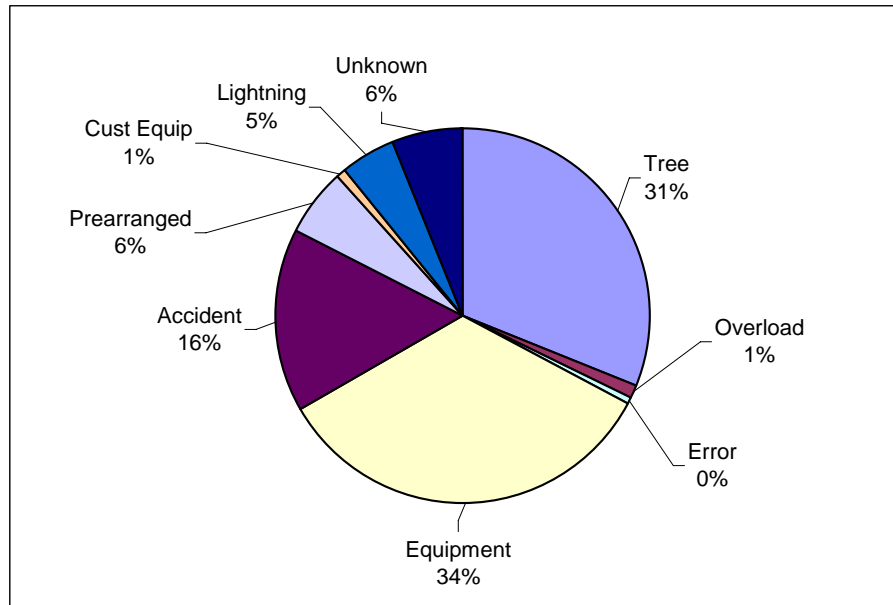


Figure 10: Orange and Rockland's 2008 Interruptions by Cause

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

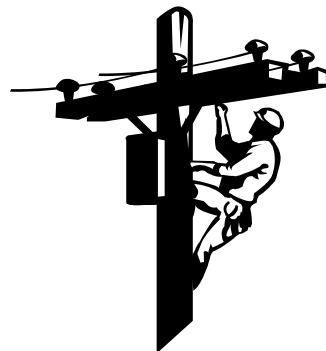
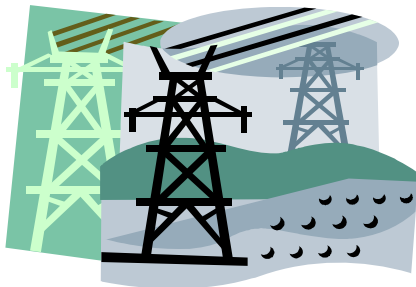
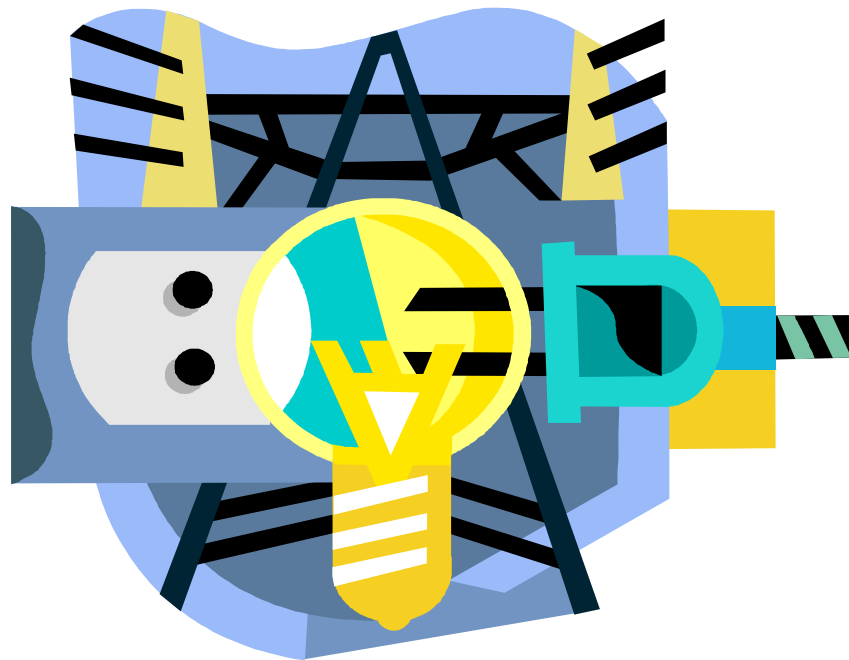
The following is a summary of Staff recommendations based on our analysis of reliability performances in 2008. Additionally, NYSEG will have to respond to actions taken as part of Case 04-E-0472.

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

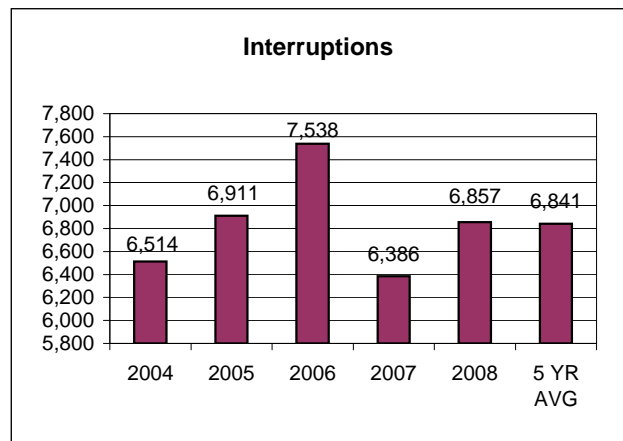
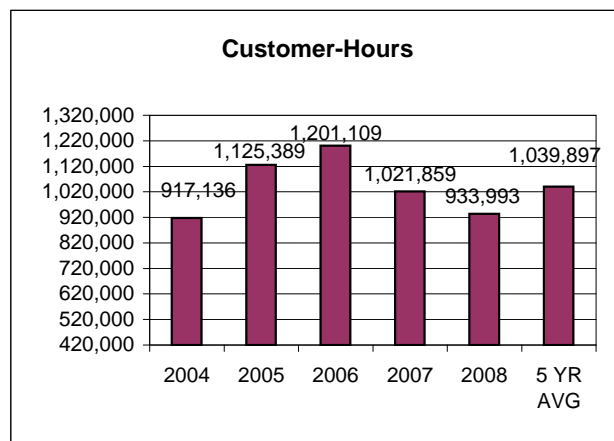
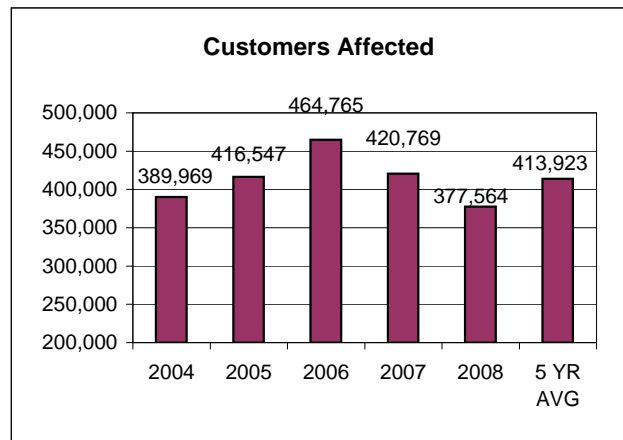
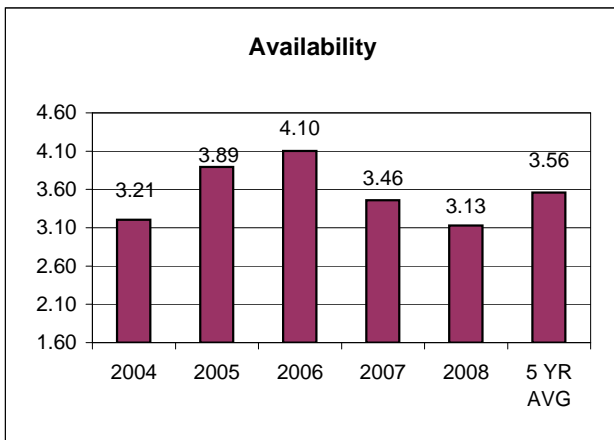
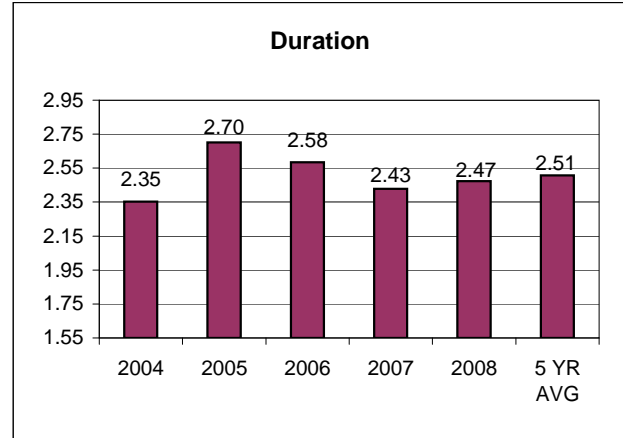
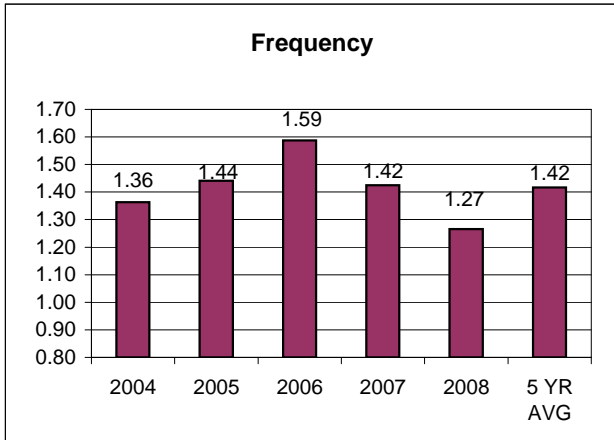
Including Major Storms

	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

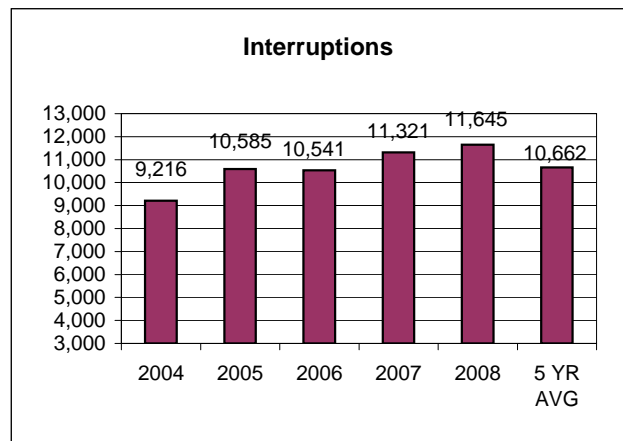
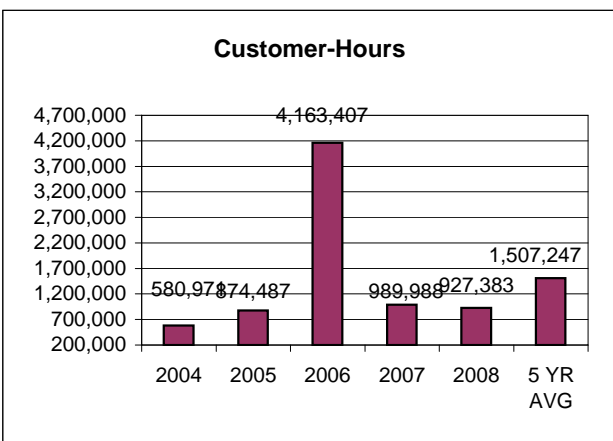
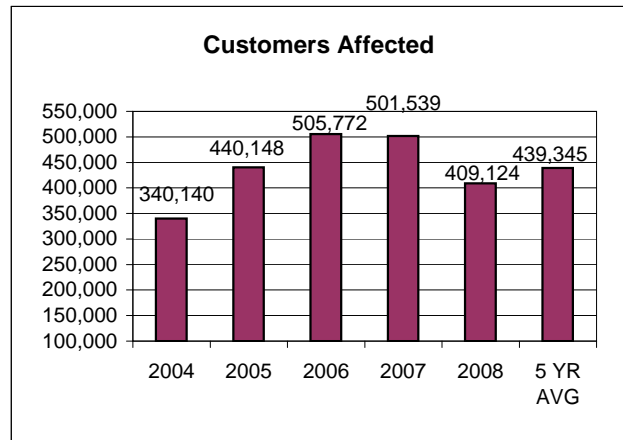
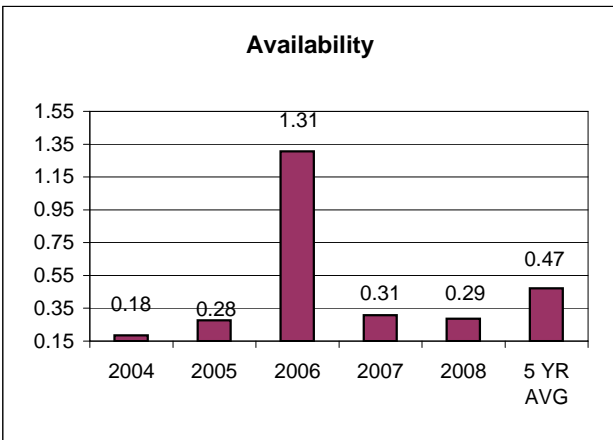
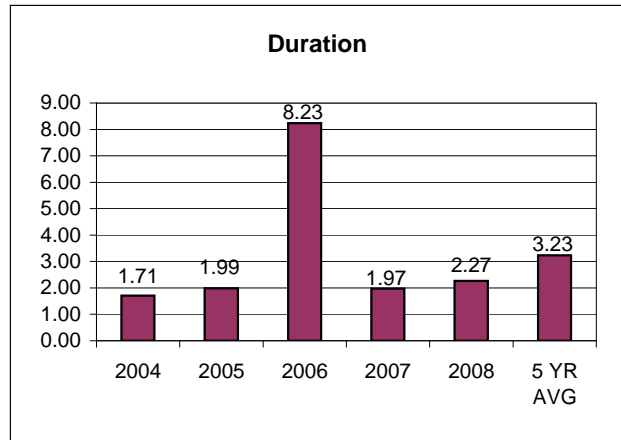
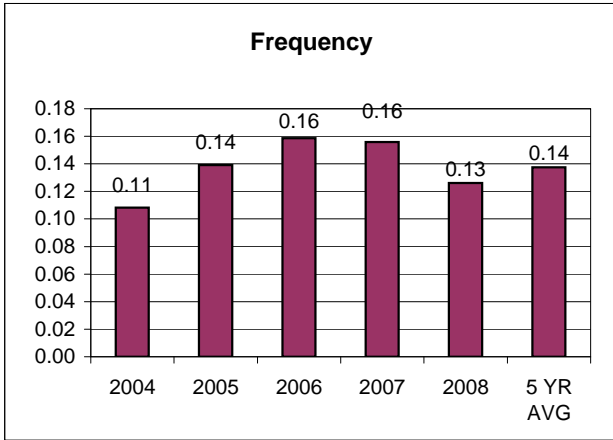
* Customers Served is the number of customers served at the end of the current year.

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

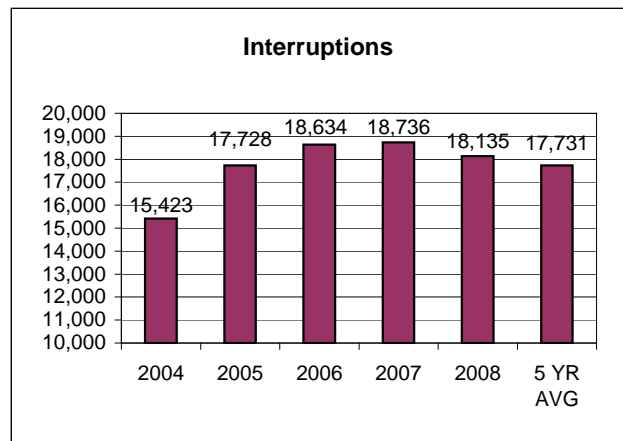
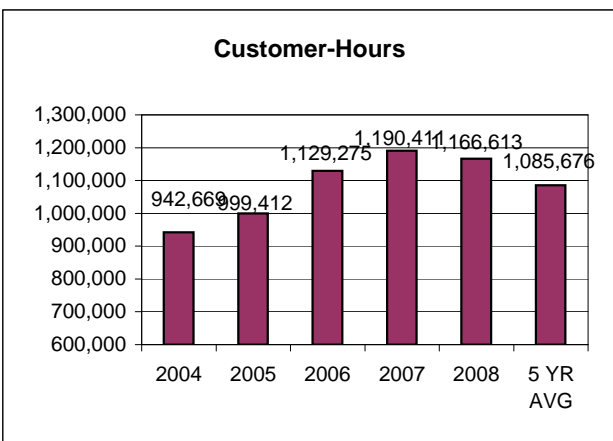
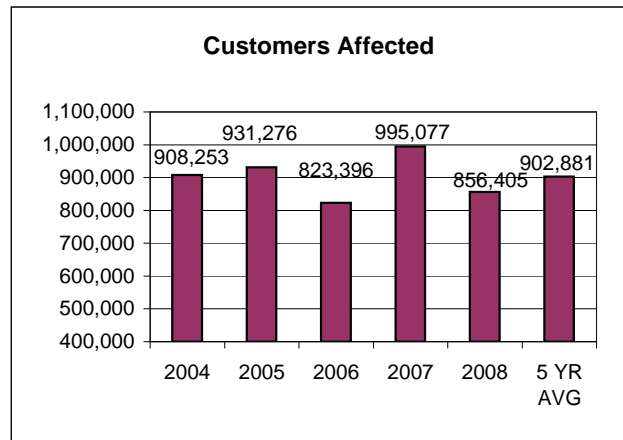
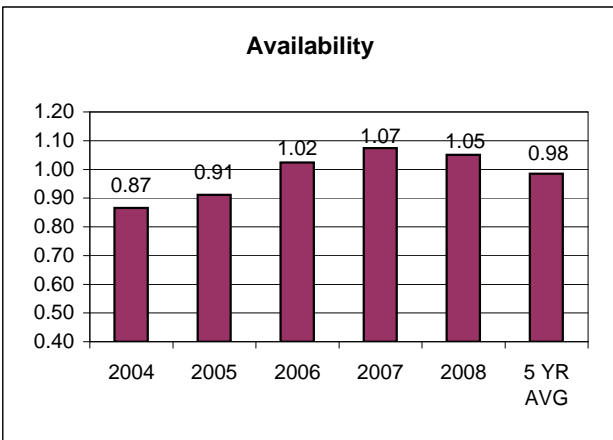
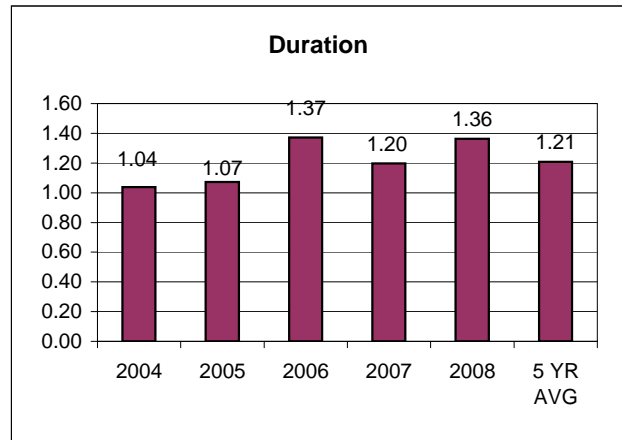
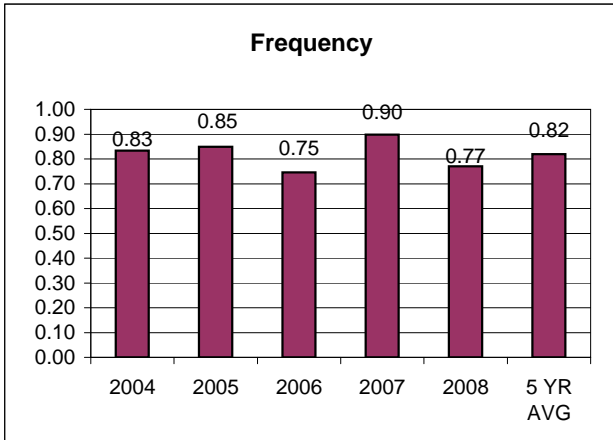
Central Hudson Gas and Electric (Excluding Major Storms)



Consolidated Edison - System (Excluding Major Storms)

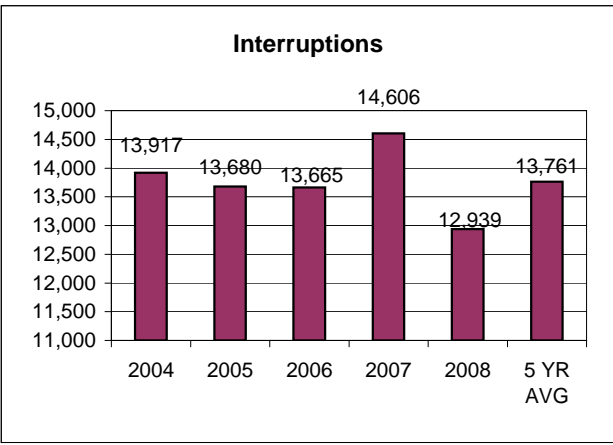
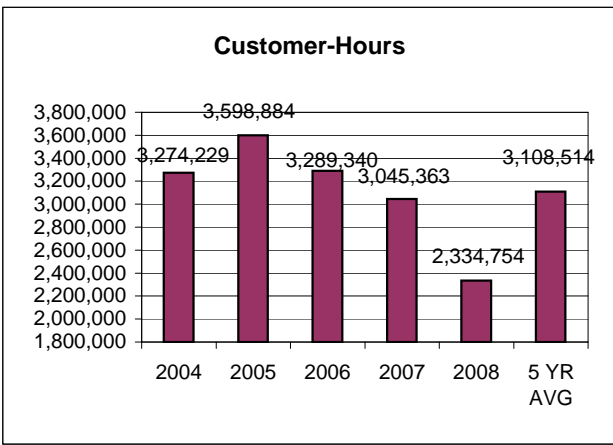
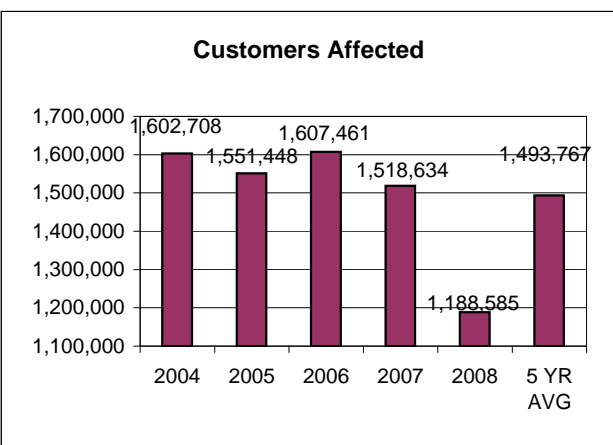
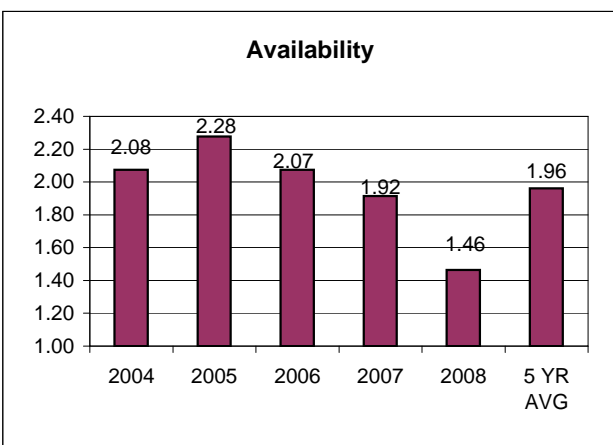
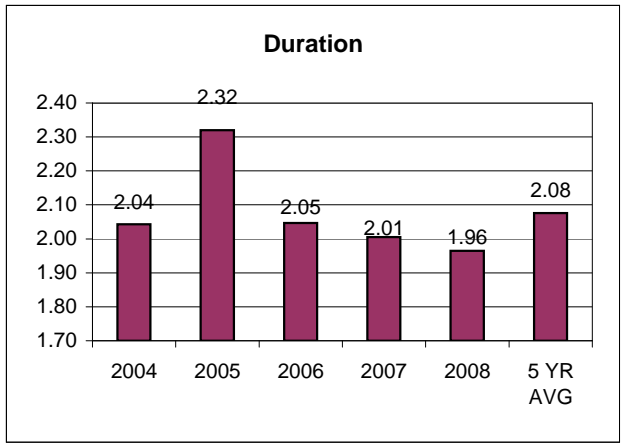
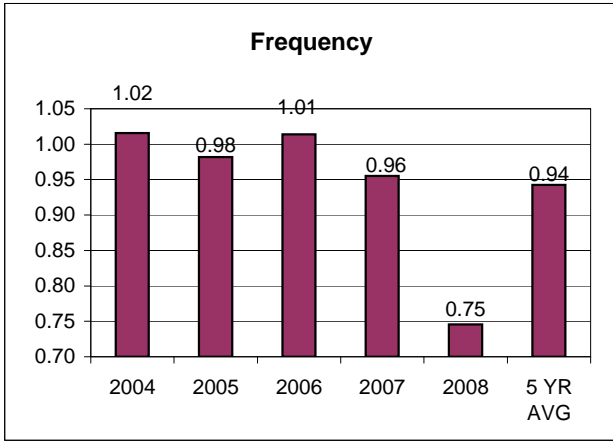


Long Island Power Authority (Excluding Major Storms)

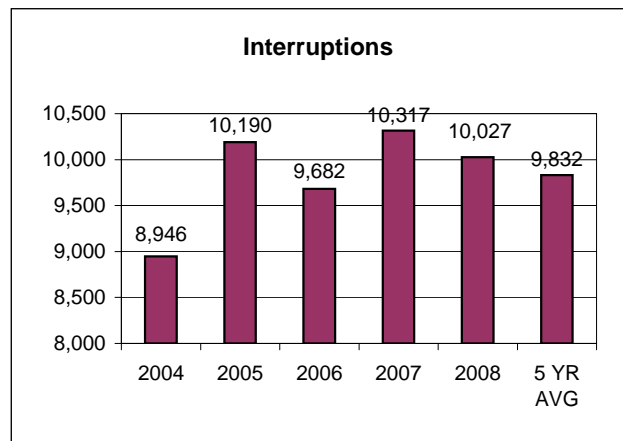
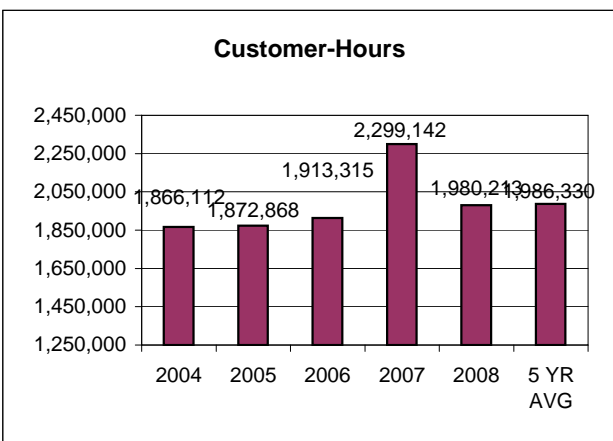
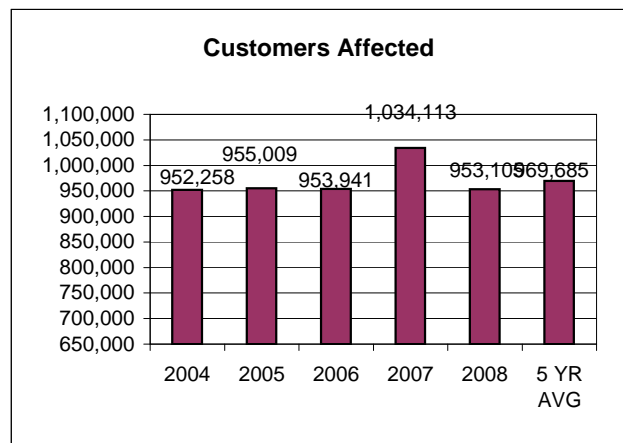
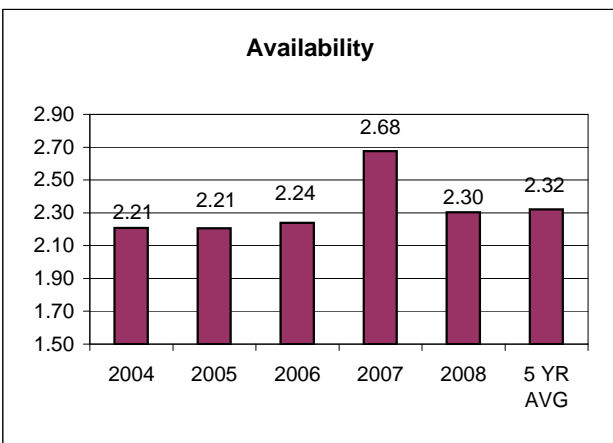
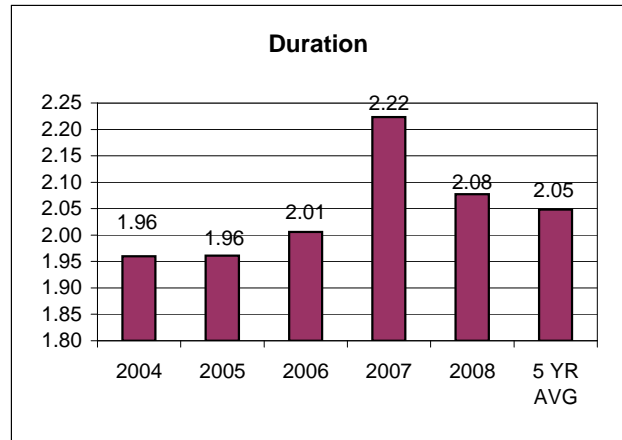
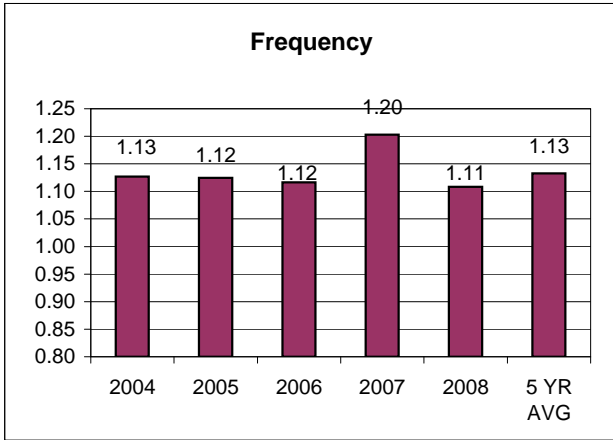


* LIPA is not regulated by the NYS PSC.

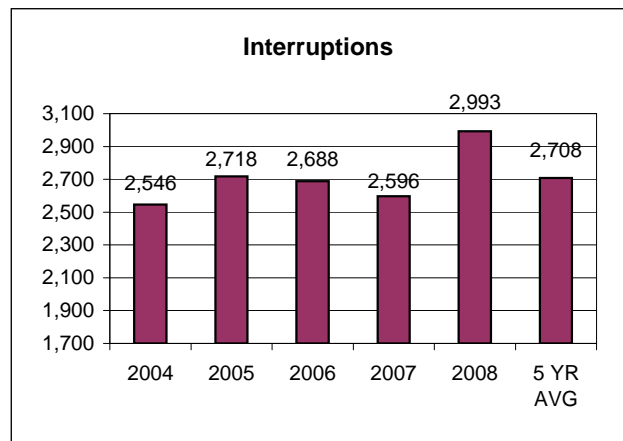
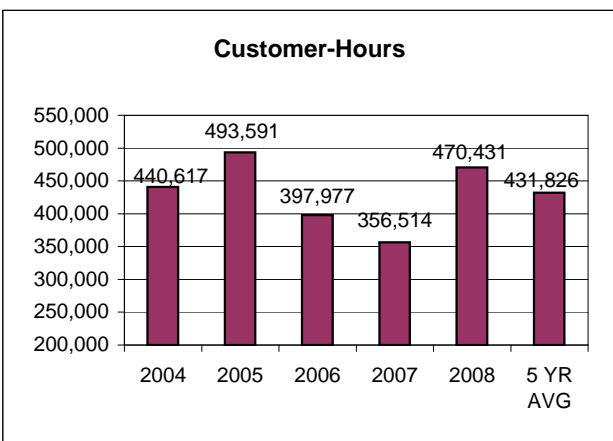
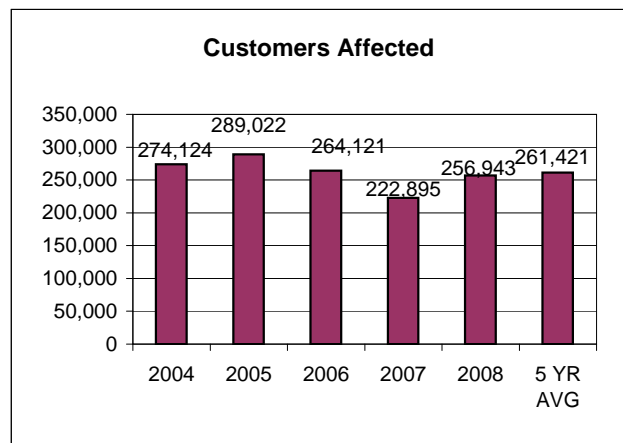
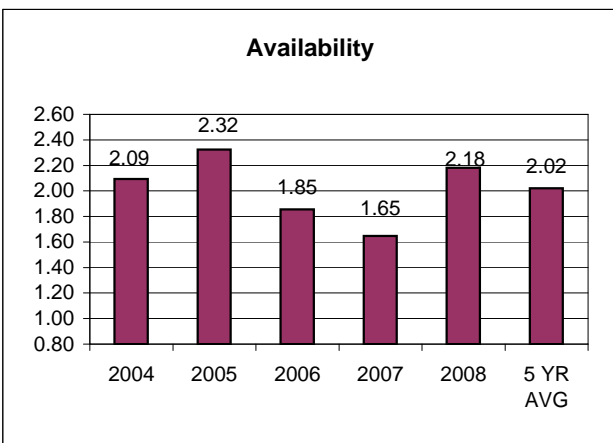
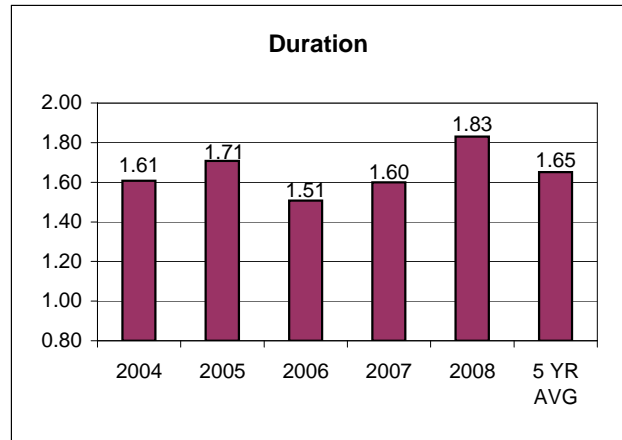
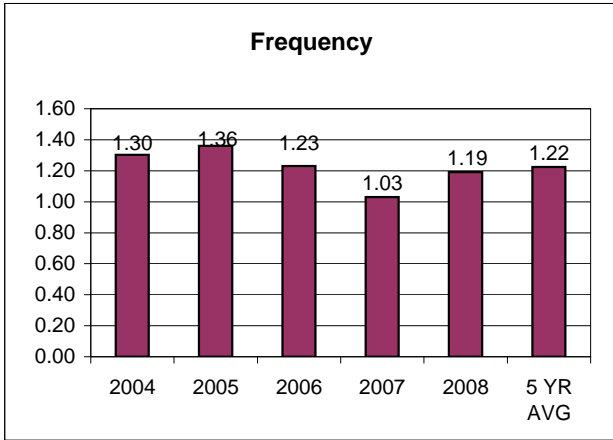
National Grid (Excluding Major Storms)



New York State Electric and Gas (Excluding Major Storms)



Orange and Rockland Utilities (Excluding Major Storms)



Rochester Gas and Electric (Excluding Major Storms)

