

STATE OF NEW YORK  
DEPARTMENT OF PUBLIC SERVICE



2009 GAS SAFETY  
PERFORMANCE MEASURES REPORT  
(CASE 10-G-0225)

Safety Section  
Office of Electric, Gas & Water  
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## **EXECUTIVE SUMMARY**

This report examines the results of New York State natural gas local distribution companies' (LDCs) performance in three specific safety areas (damage prevention, emergency response, and leak management) for 2009. Historic data back to 2003 is also provided to show trends and context.

The performance measures are the result of collaborative efforts between Staff and the LDCs to improve identification and tracking of areas that are critical to gas safety. The data used in the report were gathered and submitted by the LDCs using processes developed from these collaborative efforts. Overall, the data indicate that LDC performance has substantially improved across the state over the seven year period. There has been a 62% improvement in total damage prevention performance, the 30-minute emergency response time has improved from 76.8% in 2003 to 81.9% in 2009, and the year-end leak backlog of potentially hazardous leaks has decreased 75%, from 1,154 to 292. As LDCs continue their outreach efforts, adopt better practices in responding to leak and odor calls, and work to replace aging leak-prone infrastructure, Staff expects further improvement will occur.

For those LDCs identified as having improvement opportunities, Staff recommends that those companies conduct a self-evaluation, and respond within 45 days with specific details on how they plan to improve performance. A more detailed discussion of the 2009 results for each performance measure follows.

## Damage Prevention

The first measure, damage prevention, gauges the ability of LDCs to minimize damage to buried facilities caused by excavation activities. The damage measure is further broken down into four categories: damages due to (1) mismarks (inaccurate marking by the LDC of its buried facilities); (2) company and company contractor error; (3) third party excavator error; and (4) lack of notification of intent to excavate (no-calls).

Overall, damage prevention performance across the state improved over 12% during 2009. After rising every year since 2003, the number of requests to locate underground gas facilities (tickets) received by the LDCs decreased slightly (0.5%) in 2009. This is most likely attributable to a decrease in construction activity due to the slowing of the economy. Double-digit improvements from 2008 were achieved in 2009 in the areas of damages due to Company and Company Contractor Error and damages due to No-calls. Damage performance due to third party Excavator Error improved nearly 9% while damages due to Mismarks deteriorated about 2%. Staff attributes these positive results, in part, to continuing public education efforts undertaken by both the LDCs and the One-Call Centers, the 811 three-digit dialing initiative, and the Commission's enforcement process for non-compliance with its regulations protecting underground facilities. Despite overall statewide improvement, a few LDCs experienced increased damage rates within one or more of the four categories of damages described above.

Mismarks - In the area of damages due to Mismarks (failure to accurately mark the location of underground facilities)

the statewide level declined about 2% during 2009 over 2008 performance, after achieving an improvement of over 26% during 2008, from 2007. LDCs with notable improvement over their 2008 levels are Corning Natural Gas Corporation (Corning) and St. Lawrence Gas Company, Inc. (St. Lawrence) which experienced no damages due to mismarks during 2009, and Orange & Rockland Utilities, Inc. (O&R), which has continued its improvement trend.

In the previous three reports Niagara Mohawk Power Corporation d/b/a National Grid (NGrid Upstate) was identified as being among the worst performers relative to the statewide average in this metric. It continued its improvement up until 2008, but deteriorated slightly during 2009. National Fuel Gas Distribution Corporation (NFG) and The Brooklyn Union Gas Company d/b/a National Grid NY (NGrid NY) also experienced a slight deterioration in performance during 2009. These two LDCs, along with KeySpan Gas East Corporation d/b/a National Grid (NGrid LI), which has steadily improved over the past several years, remain worse than the statewide average performance level.

Damages caused by Mismarks is an area where LDCs have more control over their level of performance than they would relative to damages due to Excavator Error and damages due to No-calls. Staff expects that through training, quality control, vendor procurement practices and increased management attention, the LDCs should be able to achieve reductions in damages caused by Mismarks.

Company & Company Contractor - Another area where LDCs have more direct control of their performance is in the area of damages due to Company & Company Contractor personnel

error. These are excavation damages caused by the LDC employees or their directly hired and trained contractors. These types of damages have historically been the lowest percentage of excavation damages. O&R has historically had difficulty in this area due to older vintages of pipe that were installed with relatively poor mapping and lack of a tracer wire.<sup>1</sup> O&R has significantly improved in this area since 2004, but experienced a small deterioration during 2009, although not to the levels it had experienced in previous years. However, it does remain worse than the statewide level. Central Hudson Gas & Electric Corporation (Central Hudson) and Corning performed worse than the statewide level and attribute their performance to recently accelerated leak-prone pipe replacement programs, which increases excavation activities around their own buried facilities by their own crews or contractors. Most LDCs have accelerated their leak-prone pipe replacement programs in recent years and have been able to adapt to the increased excavation activity. Central Hudson experienced its fourth consecutive year of worsening performance, performing at its worst level ever. Corning also experienced its worst level since Staff has been collecting this data; it previously had no damages due to company employees or company contractors. Consolidated Edison Company of New York, Inc. (Con Edison) had steadily improved over a four year period, but was identified in last year's report as experiencing a higher rate of these damages in 2007 and 2008. The company reported it was adjusting to a higher level of infrastructure renewal

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<sup>1</sup> A wire commonly installed next to a plastic pipeline that can carry a small impressed current to enable locating from above ground.

projects both in its gas and electric businesses. It improved its performance during 2009 to match its previous best performance level.

Excavator Error - After remaining flat during 2007, the statewide level for damages due to Excavator Error improved 24% during 2008, and another 9% during 2009. Six of the 11 LDCs experienced improved performance over 2008 levels. The most notable improvement was made by O&R which improved over 48%. Con Edison, Central Hudson, and National Grid NY all improved between 26% and 28% over 2008 performance levels. Corning and St. Lawrence each experienced significant deterioration during 2009. Both experienced triple the actual number of damages that were experienced during 2008. These two LDCs, in addition to NFG and NGrid Upstate, experienced damage rates well above the statewide level.

No-calls - For the fourth year in a row, statewide damages due to No-calls experienced a double-digit improvement. Since 2005, the statewide level has improved over 68%. All LDCs have participated over the past three years in providing Staff with details of damages due to No-calls for possible enforcement actions. Many have reported this to be a beneficial program which has contributed to more awareness of the One-Call regulations. During this time period the statewide rate of damages due to No-calls has been cut in half.

Although LDC performance in the Excavator Error and No-call damage measures are dependent on the behavior of outside parties, improvements are achievable through outreach efforts such as excavator education, safety

awareness programs, 811 public education efforts, aggressive recovery of repair costs, and providing information to Staff for potential enforcement actions. Staff anticipates that the continuation of public outreach efforts associated with the 811 three-digit dialing initiative will also lead to better performance in the future.

### Emergency Response

The second measure, emergency response, gauges the ability of LDCs to respond promptly to reports of gas leaks or emergencies by examining the percentage of calls that fall within various response times. This performance measure contains three specific response goals: respond to 75% of emergency calls within 30 minutes, 90% within 45 minutes, and 95% with 60 minutes. Response performance continued to improve across the state in 2009. Staff attributes this progress to LDCs adopting more efficient work practices, fewer numbers of leak and odor calls, utilization of new technologies such as global positioning systems (GPS) to quickly identify the most appropriate employee to respond to an emergency notification, public awareness initiatives on the properties of natural gas, and placement of existing or additional personnel in certain geographical areas during the times of day that have historically had high volumes of emergency notifications.

For the second time since 2003, all LDCs met all three response goals. As noted in last year's performance measures report, 2008 was the first year that NGrid NY met the 75% within 30-minutes goal. It further improved slightly during 2009. In addition to NGrid NY, NGrid Upstate, New York State Electric and Gas Corporation

(NYSEG), O&R, and St. Lawrence achieved their best performances in the 30-minute measure since 2003.

### Leak Management

The third measure, leak management, examines LDCs' performance in effectively maintaining leak inventories and keeping potentially hazardous leaks to a minimum. The measure focuses on the year-end backlog of leaks requiring repair. The end of the calendar year is regarded as the beginning of the frost season, when there is a greater chance of gas migration into buildings because the gas cannot vent as readily through the ground to the atmosphere due to the blanket of frost. Since year-end 2003, the backlog has decreased 75% statewide. It was reported in the 2008 report that Central Hudson was the only LDC to have a significantly higher backlog in 2008 than in 2003. Central Hudson made adjustments to its operations during 2009 and significantly reduced its backlog by the end of the year. LDCs with notable percent decreases in leak backlog over the period are Con Edison, NGrid LI, NGrid Upstate, NYSEG, and Rochester Gas & Electric Corporation (RG&E).

The net result statewide for year-end 2009 is a 15.4% decrease in the number of leaks requiring repair compared to year-end 2008. During 2009 two companies experienced increases in year-end backlogs: NGrid Upstate and NYSEG. While NGrid Upstate's increase is large on a percentage basis, its backlog is substantially lower than in previous years. NYSEG's year-end backlog increased one leak over 2008 and it remains among the LDCs statewide with the fewest number of active leaks on its system.



## Infrastructure Replacement

LDCs across the state are collectively working to update the gas distribution infrastructure. In 2010 LDCs expect to replace over 310 miles of leak-prone pipe in New York. The pipe targeted for replacement is being identified through the use of risk-based methodologies to prioritize replacements. These efforts will improve public safety, and over time, will help reduce the leakage rates LDCs experience.

## Next Steps

The analysis of each performance measure in this report identifies specific areas where certain LDCs have room for improvement. Staff recommends that those LDCs develop action plans to improve performance. In some cases, Staff suggests certain issues to examine, although the LDCs need not limit themselves to Staff's suggestions and are free to explore additional areas.

This report will be transmitted to an executive level operating officer of each LDC. For those LDCs identified as having improvement opportunities, Staff recommends that those companies conduct a self-evaluation, and provide the Safety Section of the Office of Electric, Gas and Water within 45 days specific details on how they plan to improve performance.

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**COMPANY ACRONYMS**

<b>Company</b>	<b>Acronym in Report</b>
Central Hudson Gas & Electric Corporation	Central Hudson
Consolidated Edison Company of New York, Inc.	Con Edison
Corning Natural Gas Corporation	Corning
KeySpan Gas East Corporation d/b/a National Grid	NGrid LI
The Brooklyn Union Gas Company d/b/a National Grid NY	NGrid NY
National Fuel Gas Distribution Corporation	NFG
New York State Electric & Gas Corporation	NYSEG
Niagara Mohawk Power Corporation d/b/a National Grid	NGrid Upstate
Orange & Rockland Utilities, Inc.	O&R
Rochester Gas & Electric Corporation	RG&E
St. Lawrence Gas Company, Inc.	St. Lawrence

## INTRODUCTION

Gas safety performance measures were developed as a means of effectively improving local distribution companies' (LDCs) gas delivery system safety performance in areas identified as presenting the highest risks. Performance measures are tools that Staff and the LDCs can utilize to monitor the safe operation and maintenance of distribution systems. They indicate how companies are performing from year to year as well as trends over time, and whether safety aspects are improving, remaining stable, or deteriorating.

In developing the performance measures, Staff first identified areas in LDCs' systems or operations that carry the greatest potential for harm to the public if performance is sub-standard. Staff then evaluated methods for capturing and tracking appropriate data so it could be used as a practical management tool. This process led to the identification of three performance measures:

**Damage Prevention:** This measure examines damages to the LDCs' buried facilities resulting from excavator activities, which is the leading cause of incidents involving buried pipelines.

**Emergency Response Time:** This measure examines the amount of time that it takes an LDC to reach the scene of a reported gas leak or odor.

**Leak Management:** This measure examines LDC performance in effectively maintaining leak inventory levels and keeping potentially hazardous leaks to a minimum.

## **PERFORMANCE AND ANALYSIS FOR 2009**

Throughout this report, all of the figures display performance results for 2005-2009 for each LDC with the grey columns in the bar graphs representing 2005-2008, and the color columns representing 2009 results. The blue horizontal line represents the 2009 statewide performance level.

Red numbers in tables represent failure to meet the target level for the measure or a decline in performance from the previous year. Where no bar is shown in the graph for a particular company and year, there were no incidents for that measure.

### **Damage Prevention**

Damage due to excavation activity is the leading cause of natural gas pipeline failures and accidents, both statewide and nationwide.

The damage-prevention procedures are designed to work as follows: (1) excavators provide notice of their intent to excavate to a one-call system, which transmits an excavation notice (one-call ticket or ticket) to the member operators potentially affected by that excavation; (2) member operators clearly and accurately mark the location of their buried facilities in or near the excavation site; and (3) excavators work carefully around the marked facilities in order to avoid damaging them. Damages to underground facilities can be categorized by identifying where in this three-step process the root cause of an incident lies.

Evaluating the number of damages in relation to the volume of construction and excavation activity in an LDC's operating territory provides a useful basis for

assessing performance in this area. The data used in the analyses are contained in Appendix A. The method used to normalize each LDC's data is number of facility damages per 1000 one-call tickets.

The numbers of damages are categorized by damages resulting from:

- mismarks
- excavator error
- company and company contractor error
- "no-calls"

Each one-call ticket received provides an LDC the opportunity to mark its facilities correctly. Hence, the Mismatch measure specifically addresses this by examining damages caused by mismarks per 1000 tickets.

Once a one-call ticket is requested and the facilities are marked correctly, it provides an excavator the opportunity to work carefully and avoid damages. Damages due to Excavator Error per 1000 tickets tracks this category. Excavator Error damages are historically the largest component of Total Damages, partially because it entails the most effort to educate third-party contractors. Most excavators are well aware of the existence of the One-Call Centers and the requirement to notify it of planned excavation work. Many excavators are not as well versed in the additional requirements such as tolerance zones and verifying locations of underground facilities with hand-dug test holes, maintaining the marks, maintaining clearances with powered equipment, etc. Educating excavators on how to avoid damages once markouts have been requested requires more in-depth training and outreach.

Damages that are caused by LDC personnel, or by LDC direct contractors, are also included in the damage analysis as a separate category. These personnel should have the training and experience to work carefully near their own facilities. LDCs should also have better control over outside contractors they hire to perform work for them than they do over third-party contractors. Thus, this category should ideally be the smallest contributor to the total damages. The current measure tracks damages caused by all utility operations within a particular LDC. That is, for a combination LDC, damages to gas facilities caused by electric crews or electric company contractors are included.

Damages due to No-calls are simply instances where no ticket was generated because the excavator did not provide notice of intent to excavate. This metric provides an indication of the general level of awareness excavators have about the one-call notification systems. A high percentage of damages in this category indicates that efforts are needed to make excavators aware of the dangers of working around buried facilities and the importance of using the one-call notification systems.

It is important to note that the damage prevention measures evaluate actual damages to LDCs' underground facilities. Based on the data reported in 2009, more than 99.75% of one-call tickets in LDC gas areas had no associated damages to natural gas facilities. There were a total of 1,771 damages to natural gas LDC facilities in 2009, 12.6% less than in 2008. When these damages are normalized for the slight decrease of (3,428) one-call tickets (-0.5%) during 2009, the result is a significant improvement(12.2%) in total damages per 1000 one-call



tickets. While these are encouraging statistics, a single damage could lead to a catastrophic event, so it is important that LDCs and excavators strive to minimize damage to facilities.

**Figure #1** below displays the collective statewide performance regarding the damage prevention measures. Note the significant increase in the number of tickets over the period. Also take note of the significant improvement in the Total Damages measure.

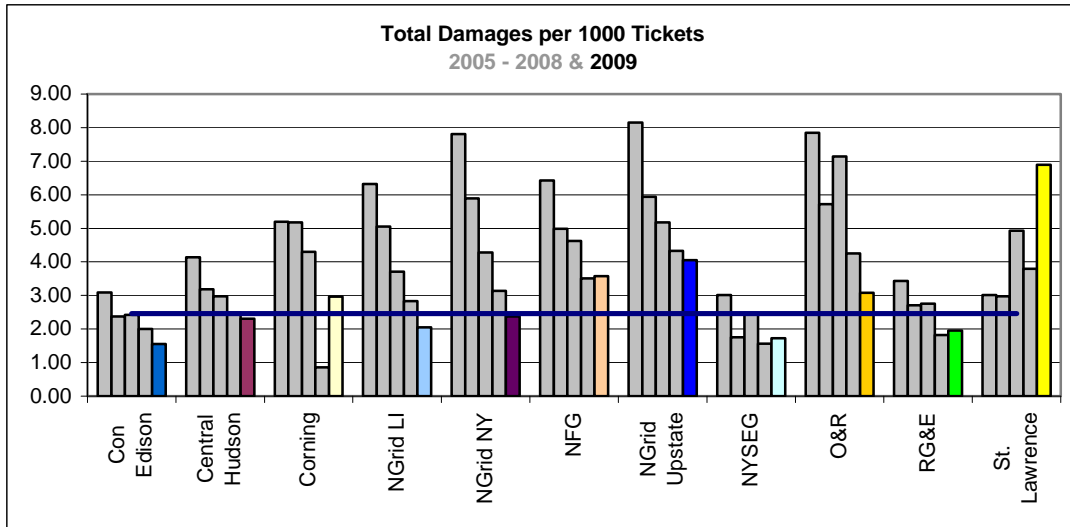
Metric	2005	2006	2007	2008	2009
# Tickets	560,257	598,603	636,338	722,903	719,475
Mismarks	1.11	0.89	0.73	0.53	0.54
Co. & Co. Contractor	0.22	0.17	0.16	0.13	0.11
Excavator Error	2.55	1.83	1.84	1.40	1.27
No-Calls	1.70	1.33	1.05	0.74	0.54
Total (per 1000)	5.59	4.21	3.78	2.80	2.46

**Figure #1** - Damages per 1000 Tickets Statewide

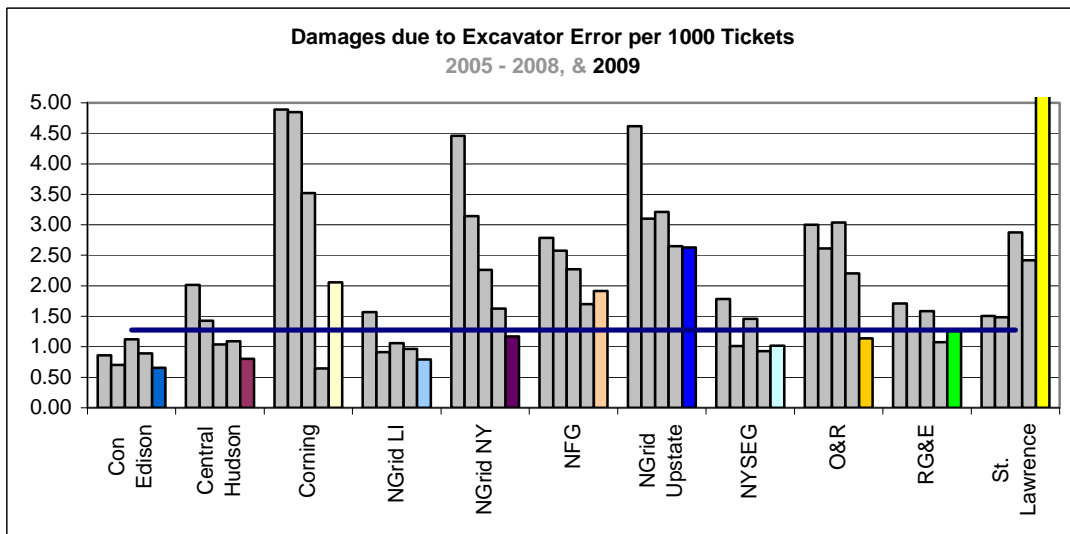
All four metrics composing the Total Damage measure either continued to improve, or remained comparatively flat from 2008 to 2009. The greatest improvement in 2009 came in the damages due to No-calls (27.3%), followed by damages due to Company and Company Contractor Error (19.6%), and then damages due to Excavator Error (8.8%). There was a slight deterioration in damages due to mismarks during 2009 (-1.8%). It is encouraging to see that LDCs have collectively maintained, and continue to improve, performance over the past several years. Performance in each measure has improved to less than half the rate of damages LDCs experienced in 2005, and damages due to No-calls occur at less than a third of the rate they did prior to 2006. The total number of tickets declined

slightly during 2009, with the decrease in construction activity due to the slow down of the economy likely outpacing gains in participation from excavators' use of the one-call system. An interesting note is that the downstate LDCs experienced an overall increase in tickets while upstate LDCs collectively experienced a decline in tickets. A possible reason for the downstate's increase in tickets is that the downstate one-call center, DigNet of New York City & Long Island, Inc. (DigNet), carried out a targeted marketing campaign in 2009 to increase awareness of the one-call system. Another factor contributing to the upstate Center's decline in tickets from 2008 to 2009 was a large tree planting program undertaken in the Buffalo area in 2008 to replace trees damaged in the October 2007 snow storm. This resulted in an unusually large increase in tickets in 2008 from 2007. Each LDC's actual number of tickets received will be presented below.

LDC performance in Total damages and Excavator Error damages is displayed in **Figure #2** and **Figure #3** below. Individual LDC damage performance is discussed in further detail in the next section.



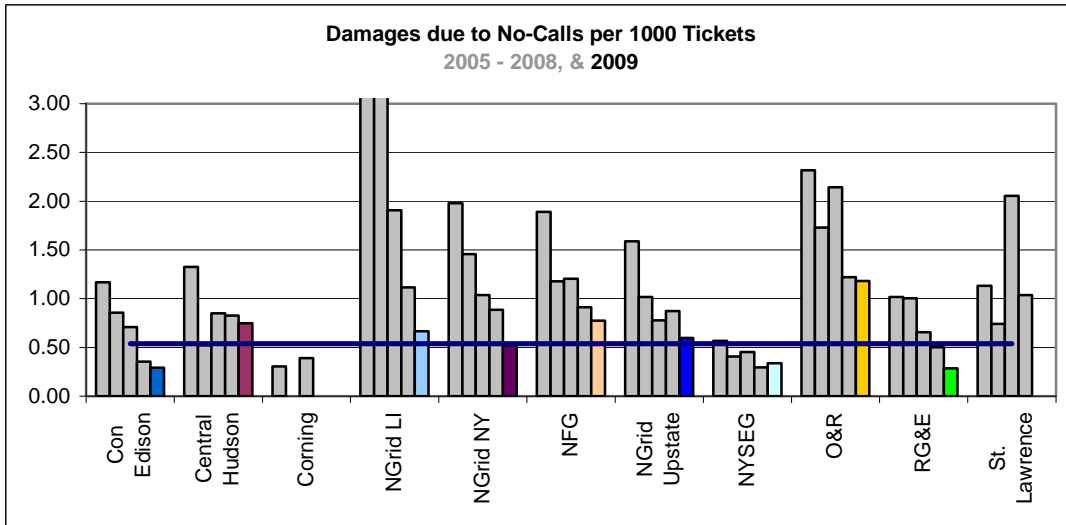
**Figure #2** - Total Damages per 1000 Tickets Statewide



**Figure #3** - Excavator Error Damages per 1000 Tickets Statewide

As can be seen in **Figure #3**, there is a wide range statewide in damages due to Excavator Error. Conring and St. Lawrence had a difficult year in preventing damages

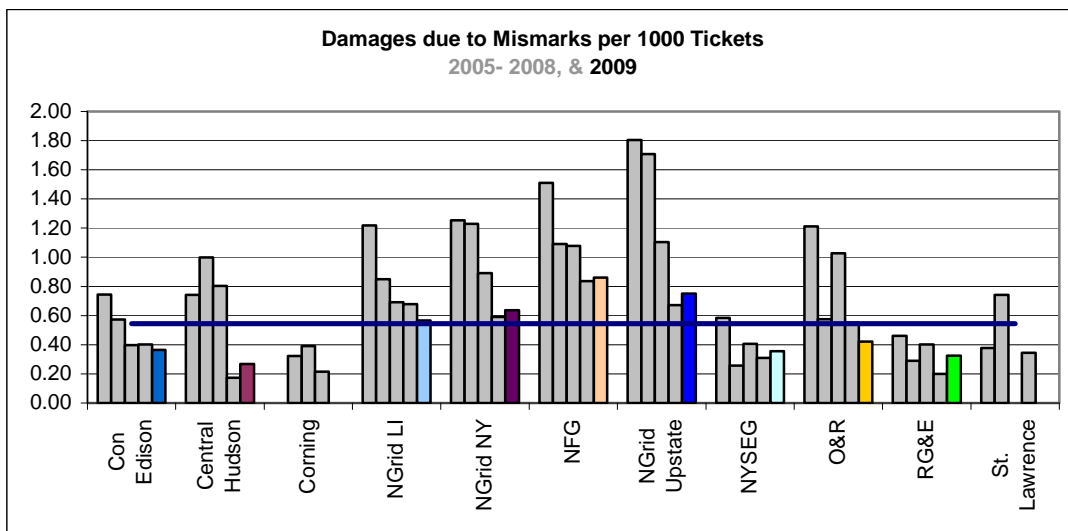
from third-party excavators and must work to improve their performance. NFG and NGrid Upstate continue to perform significantly worse than the statewide level.



**Figure #4** - No-call Damages per 1000 Tickets Statewide

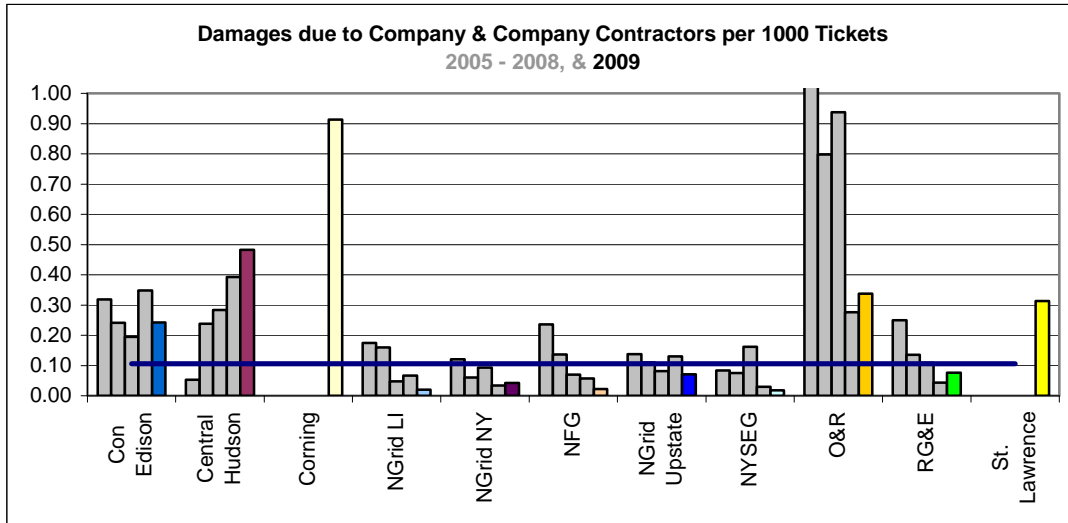
The continued improvement statewide for No-call damages is a positive sign (**Figure #4**). The improvement indicates that more excavators are becoming aware of their obligation to utilize the One-call system. Likely key contributors to the improvement are the 811 program, outreach efforts, and the voluntary reporting of these damages to Staff by the LDCs for enforcement actions for violations of 16 NYCRR Part 753 (Code Rule 753) *Protection of Underground Facilities*. In order to aid in the enforcement of Code Rule 753, Staff requested LDCs to forward information about contractors who damaged underground facilities without having markout requests. The program began in mid-2007, so 2009 was the second complete year of data. Staff evaluates the details of each damage and pertinent information regarding the excavator,

and takes enforcement actions where appropriate. This enforcement effort generates word-of-mouth communications among the excavating community about the requirements of excavators to notify the One-call centers prior to carrying out excavation work, further deterring non-compliance. In 2009, all but one LDC improved with NYSEG experiencing a slightly higher rate of damages due to No-calls.



**Figure #5** - Mismark Damages per 1000 Tickets Statewide

LDC performance in damages due to Mismarks is displayed in **Figure #5** above. Damages due to Mismarks deteriorated slightly during 2009 after steady double-digit improvement since 2005. Staff expects to see general improvement in this area as LDCs continually adopt best practices to locate their facilities, and develop better controls over their locating contractors.



**Figure #6** - *Company & Company Contractor Damages per 1000 Tickets Statewide*

Company & Company Contractor Error<sup>2</sup> damages continued to improve during 2009, occurring at half of the rate which they did in 2005. See **Figure #6** above. The greatest improvements in 2009 over 2008 performance were experienced by NGrid LI, NFG, and NGrid Upstate. Corning, NGrid NY, O&R, RG&E, and St. Lawrence experienced a greater rate of damages per 1000 tickets due to Company and Company Contractors in 2009 while Central Hudson experienced its highest level of these damages in the past seven years, with its fourth consecutive year of worsening performance. Similar to damages due to Mismarks, Staff expects to see general improvement in this area as LDCs develop better controls over their employees and direct contractors.

Note that Corning and St. Lawrence did not experience any damages due to Company & Company Contractor

<sup>2</sup> LDCs that experience damages from other utility operations within the same company, such as electric crews damaging a gas facility, include those damages in this measure.

Error in previous years but experienced four and one of these damages, respectively, during 2009.<sup>3</sup>

2009 LDC Damage Results and Analysis

This section reviews damage performance on a company-by-company basis over the past five years.

Con Edison

<b>Con Edison</b>	2005	2006	2007	2008	2009	<b>2009 Statewide</b>
Tickets	94,083	99,375	118,380	132,175	140,170	719,475
Damages/1000 tickets Due to:						
Mismarks	0.74	0.57	0.40	0.40	0.36	0.54
No-Calls	1.17	0.86	0.71	0.36	0.29	0.54
Co. & Co. Contractor	0.32	0.24	0.29	0.35	0.24	0.11
Excavator Error	0.86	0.70	1.12	0.89	0.66	1.27
Total	3.09	2.37	2.42	2.00	1.56	2.46

**Figure #7 - Con Edison Damage Performance**

Con Edison's Total damage performance improved during 2009 to its best level in the past five years, due to a reduction in damages among all categories. After experiencing two consecutive years of declining performance in damages due to Company and Company Contractor Error, it improved to match its best performance since data has been collected. Con Edison continues to experience an increase in the number of one-call tickets,<sup>4</sup> which the company attributes to greater awareness and use of the one-call

<sup>3</sup> Due to Corning's and St. Lawrence's relatively small size and lower number of one-call tickets received, a single damage in any metric can magnify its impact on performance considerably more than for other LDCs. For example, Corning experienced four of these damages during 2009 and received 4,380 tickets, for a damage rate of 0.91 damages per 1000 one-call tickets.

<sup>4</sup> Con Edison is the only gas LDC that belongs to both Dig Safely New York (for Westchester County) and DigNet.

system. Con Edison attributes its improved performance to best practices it has adopted in recent years. It does, however, remain well above the statewide level for damages due to Company and Company Contractor Error. Staff recommends that Con Edison continue to evaluate its performance in damages due to Company and Company Contractor Error and work to further improve its performance.

Central Hudson

Central Hudson	2005	2006	2007	2008	2009	2009 Statewide
Tickets	18,854	21,024	21,171	22,931	18,670	719,475
Damages/1000 tickets Due to:						
Mismarks	0.74	1.00	0.80	0.17	0.27	0.54
No-Calls	1.33	0.52	0.85	0.83	0.75	0.54
Co. & Co. Contractor	0.05	0.24	0.28	0.39	0.48	0.11
Excavator Error	2.02	1.43	1.04	1.09	0.80	1.27
Total	4.14	3.19	2.98	2.49	2.30	2.46

**Figure #8** - *Central Hudson Damage Performance*

Central Hudson's performance in damages due to Mismarks significantly improved in 2007 and 2008, but deteriorated in 2009. It experienced one more of these damages in 2009 than it had in 2008, but the performance result was magnified due to the decrease in tickets (-18.6%).

Central Hudson experienced its worst performance in Company and Company Contractor damages since data has been collected. Its performance in this area has now deteriorated for four straight years. The Company's first quarter 2010 data indicates it is off to a better start this year, not experiencing any of these damages. Even though Central Hudson continues to experience a greater



number of damages by its own work force, it has continued to improve its Total damage performance due to improvements in the other damage prevention categories.

Staff recommends that Central Hudson perform a self-analysis of its performance in damages due to Company & Company Contractor Error and take corrective actions to improve. As part of its self-assessment, Central Hudson should outline the actions it has taken over the past several years and analyze the effectiveness of each effort. It must continue to work to reverse this trend.

Corning

Corning	2005	2006	2007	2008	2009	2009 Statewide
Tickets	3,273	3,093	2,558	4,644	4,380	719,475
Damages/1000 tickets Due to:						
Mismarks	0.00	0.32	0.39	0.22	0.00	0.54
No-Calls	0.31	0.00	0.39	0.00	0.00	0.54
Co. & Co. Contractor	0.00	0.00	0.00	0.00	0.91	0.11
Excavator Error	4.89	4.85	3.52	0.65	2.05	1.27
Total	5.19	5.17	4.30	0.86	2.97	2.46

**Figure #9 - Corning Damage Performance**

Corning experienced four damages due to Company and Contractor Error in 2009, which it says was primarily driven by excavating in difficult areas while carrying out its leak-prone pipe replacement program. It also experienced a significant increase in damages due to Excavator Error over its 2008 performance level, although not to its previous years' higher performance levels. Corning also experienced an approximate 6% decrease in one-

call tickets. In the 2006 and 2007<sup>5</sup> reports Corning's performance in damages due to Excavator Error was high relative to the statewide average, and it was recommended to take actions to improve in those reports. During 2008 Corning significantly improved its damages due to Excavator Error performance, but deteriorated in 2009. Its Total damage performance was greatly impacted by the deterioration in damages due to Excavator Error, back to being worse than the statewide average. Staff recommends that Corning perform a self-analysis of its performance in damages due to Company and Contractor Error and damages due to Excavator Error and take corrective actions to improve.

NGrid LI

NGrid LI	2005	2006	2007	2008	2009	2009 Statewide
Tickets	80,402	94,156	105,488	119,216	149,860	719,475
Damages/1000 tickets Due to:						
Mismarks	1.22	0.85	0.69	0.68	0.57	0.54
No-Calls	3.36	3.13	1.91	1.12	0.67	0.54
Co. & Co. Contractor	0.17	0.16	0.05	0.07	0.02	0.11
Excavator Error	1.57	0.91	1.06	0.96	0.79	1.27
Total	6.32	5.06	3.71	2.83	2.05	2.46

**Figure #10** - *NGrid LI Damage Performance*

NGrid LI experienced improvement in all damage categories during 2009. While the company experienced an approximate decrease of 10% in actual damages over in 2008 than in 2009, the significant increase in the number of tickets greatly improved its computed performance per 1000 tickets.<sup>6</sup> NGrid LI has historically been identified as an

<sup>5</sup> Cases 07-G-0461 and 08-G-0413 In the Matter of Staff's Analysis of Local Distribution Company Safety Performance and Performance Measures

<sup>6</sup> NGrid LI is entirely within the DigNet territory.

outlier in damages due to No-calls, and it continued its improvement during 2009 by experiencing only 21% of the damages that it had in 2006. For the first time since data has been collected NGrid LI's Total damages performance is better than the statewide level.

NGrid NY

NGrid NY	2005	2006	2007	2008	2009	2009 Statewide
Tickets	66,184	65,838	75,164	87,895	94,117	719,475
Damages/1000 tickets Due to:						
Mismarks	1.25	1.23	0.89	0.59	0.64	0.54
No-Calls	1.98	1.46	1.04	0.89	0.52	0.54
Co. & Co. Contractor	0.12	0.06	0.09	0.03	0.04	0.11
Excavator Error	4.46	3.14	2.26	1.63	1.17	1.27
Total	7.81	5.89	4.28	3.14	2.37	2.46

**Figure #11** - *NGrid NY Damage Performance*

NGrid NY continued to improve its Total damage performance in 2009, while also experiencing a greater number of tickets. It continued to achieve notable improvements in damages due to No-calls and damages due to Excavator Error. NGrid NY did experience a small deterioration in damages due to Mismarks and damages due to Company and Company Contractor Error. NGrid NY achieved a Total damage performance better than the statewide level for the first time in 2009. Even though NGrid NY's performance in damages due to Mismarks has improved substantially over the past several years, it remains worse than the statewide average and should continue its efforts to improve.

NFG

NFG	2005	2006	2007	2008	2009	2009 Statewide
Tickets	76,142	80,690	86,281	105,292	91,786	719,475
Damages/1000 tickets Due to:						
Mismarks	1.51	1.09	1.08	0.84	0.86	0.54
No-Calls	1.89	1.18	1.21	0.91	0.77	0.54
Co. & Co. Contractor	0.24	0.14	0.07	0.06	0.02	0.11
Excavator Error	2.78	2.58	2.27	1.70	1.92	1.27
Total	6.42	4.98	4.62	3.50	3.57	2.46

**Figure #12** - *NFG Damage Performance*

NFG continued its improvement in damages due to No-calls and damages due to Company and Contractor Error during 2009. It experienced a slight deterioration in damages due to Mismarks, and a greater deterioration in damages due to Excavator Error. NFG actually experienced a decrease in the number of actual damages, but the decrease in ticket volume (-13%) resulted in a higher damage rate per 1000 tickets. Part of the decrease in 2009 ticket volume over 2008 may be due to the tree planting program in Buffalo in 2008, as mentioned earlier. As discussed in the 2008 report, even though NFG has generally shown improvement since 2004, its performance continues to be relatively weak in every metric except Company & Company Contractor Error damages when compared to statewide levels. NFG was identified as an outlier in damages due to Mismarks in the 2006 and 2007 reports, and did realize a 22% improvement during 2008, but deteriorated in 2009 and remains the worst performer in the state. Staff recommends that NFG perform a self-analysis of its performance in damages due to Mismarks and damages due to Excavator error and continue to take corrective actions to improve.

NGrid Upstate

NGrid Upstate	2005	2006	2007	2008	2009	2009 Statewide
Tickets	87,517	91,286	85,985	84,857	85,165	719,475
Damages/1000 tickets Due to:						
Mismarks	1.81	1.71	1.10	0.67	0.75	0.54
No-Calls	1.59	1.02	0.78	0.87	0.60	0.54
Co. & Co. Contractor	0.14	0.11	0.08	0.13	0.07	0.11
Excavator Error	4.62	3.10	3.21	2.65	2.63	1.27
Total	8.15	5.94	5.18	4.32	4.05	2.46

**Figure #13 - NGrid Upstate Damage Performance**

NGrid Upstate was identified as a significant outlier in damages due to Mismarks in the 2006 report and responded with substantial improvement in 2007 and 2008. It experienced deterioration in 2009 and remains worse than the statewide level. NGrid Upstate continued to improve its performance in damages due to No-calls and Company and Company Contractor Error in 2009. It also achieved a slight improvement in damages due to Excavator Error. However, NGrid continues to experience a Total Damage rate well above the statewide level and must work to improve. Staff recommends that NGrid Upstate perform a self-analysis of its overall damage prevention program, particularly in the areas of damages due to Mismarks and damages due to Excavator Error, and take corrective actions to improve.

NYSEG

<b>NYSEG</b>	2005	2006	2007	2008	2009	2009 Statewide
Tickets	60,046	66,178	61,629	67,772	56,134	719,475
Damages/1000 tickets Due to:						
Mismarks	0.58	0.26	0.41	0.31	0.36	0.54
No-Calls	0.57	0.41	0.45	0.30	0.34	0.54
Co. & Co. Contractor	0.08	0.08	0.16	0.03	0.02	0.11
Excavator Error	1.78	1.01	1.46	0.93	1.02	1.27
Total	3.01	1.75	2.48	1.56	1.73	2.46

**Figure #14 - NYSEG Damage Performance**

After experiencing deterioration across the board during 2007, NYSEG performed a self assessment of its damage prevention operations, and took several actions to improve its performance in 2008. In 2009 it experienced fewer damages than in 2008, but received significantly fewer (-17%) tickets in 2009. Even though its general overall performance deteriorated, NYSEG remains among the better performers in the state.

O&R

<b>O&amp;R</b>	2005	2006	2007	2008	2009	2009 Statewide
Tickets	18,995	22,559	22,395	25,389	23,690	719,475
Damages/1000 tickets Due to:						
Mismarks	1.21	0.58	1.03	0.55	0.42	0.54
No-Calls	2.32	1.73	2.14	1.22	1.18	0.54
Co. & Co. Contractor	1.32	0.80	0.94	0.28	0.34	0.11
Excavator Error	3.00	2.62	3.04	2.21	1.14	1.27
Total	7.84	5.72	7.14	4.25	3.08	2.46

**Figure #15 - O&R Damage Performance**

After experiencing significant deterioration in every damage metric during 2007, O&R significantly improved during 2008 to its best levels since data has been

collected. O&R continued improving in each damage category in 2009 except for a deterioration in damages due to Company and Company Contractor Error, although not to previous years' performance levels. It did achieve its best performance in Total damages since data has been collected. O&R's performance is better than the statewide level in both damages due to Mismarks and damages due to Excavator Error. It continues to lag significantly behind in the statewide level in damages due to No-calls and damages due to Company and Company Contractor Error. Staff recommends that O&R perform a self-analysis of its performance in these two areas and continue to take corrective actions to improve.

RG&E

RG&E	2005	2006	2007	2008	2009	2009 Statewide
Tickets	52,108	51,712	54,854	69,836	52,313	719,475
Damages/1000 tickets Due to:						
Mismarks	0.46	0.29	0.40	0.20	0.32	0.54
No-Calls	1.02	1.01	0.66	0.50	0.29	0.54
Co. & Co. Contractor	0.25	0.14	0.11	0.04	0.08	0.11
Excavator Error	1.71	1.28	1.59	1.07	1.26	1.27
Total	3.44	2.71	2.75	1.82	1.95	2.46

**Figure #16** - *RG&E Damage Performance*

After a minor deterioration in performance during 2007, RG&E was able to improve significantly during 2008, but experienced deterioration in 2009. RG&E experienced fewer actual damages during 2009, but the significant decrease in tickets (-25%) resulted in deterioration in computed damage performance. For example, it experienced one more Company and Company Contractor Error damage in 2009 than it did in 2008, but its computed performance is twice the rate per 1000 tickets. RG&E continued to perform

better than the statewide performance levels in each metric.

St. Lawrence

St. Lawrence	2005	2006	2007	2008	2009	2009 Statewide
Tickets	2,653	2,692	2,433	2,896	3,190	719,475
Damages/1000 tickets Due to:						
Mismarks	0.38	0.74	0.00	0.35	0.00	0.54
No-Calls	1.13	0.74	2.06	1.04	0.00	0.54
Co. & Co. Contractor	0.00	0.00	0.00	0.00	0.31	0.11
Excavator Error	1.51	1.49	2.88	2.42	6.58	1.27
Total	3.02	2.97	4.93	3.80	6.90	2.46

**Figure #17 - St. Lawrence Damage Performance**

After experiencing deterioration in performance during 2007, St. Lawrence improved during 2008, but had significant deterioration in 2009. St. Lawrence has generally experienced the greater part of its damages from Excavator Error, and this was the case again in 2009 when a problem excavator damaged its facilities on several occasions. Staff pursued penalty actions against the excavator after the situation was brought to its attention. St. Lawrence also experienced its first damage due to Company and Company Contractors in the past five years. Staff expects St. Lawrence to have learned from these incidents during 2009 and take corrective action to reduce such occurrences in the future.



### Emergency Response

16 NYCRR §255.825(d) requires that LDCs provide a monthly report to Staff that includes a breakdown of the total number of gas leak and emergency calls received during the month and responded to in intervals of 15 minutes during normal business hours, weekdays outside business hours, and weekends and holidays. The report also indicates the percentage of calls responded to within 30, 45, and 60 minutes. The following have been established as acceptable overall response time standards: 75% within 30 minutes, 90% within 45 minutes, and 95% within 60 minutes. Each company has a very small number of instances of response times exceeding 60 minutes.<sup>7</sup>

The intent of the reporting requirement and the performance measure is to evaluate company responses to gas leak, odor, and emergency calls that are generated by the public and other authorities (e.g. police, fire, and municipal employees). For the purposes of reporting, the response time is measured from the time the call is sent to the company dispatcher to the time of arrival of qualified<sup>8</sup> company personnel at the location.

When an LDC responds to a report of a gas, or an otherwise unidentified odor, and an investigation determines that the problem is not attributed to natural gas, the event is nevertheless included in the reported

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<sup>7</sup> The LDCs are expected to review the circumstances of each instance exceeding 60 minutes and where possible work towards their elimination.

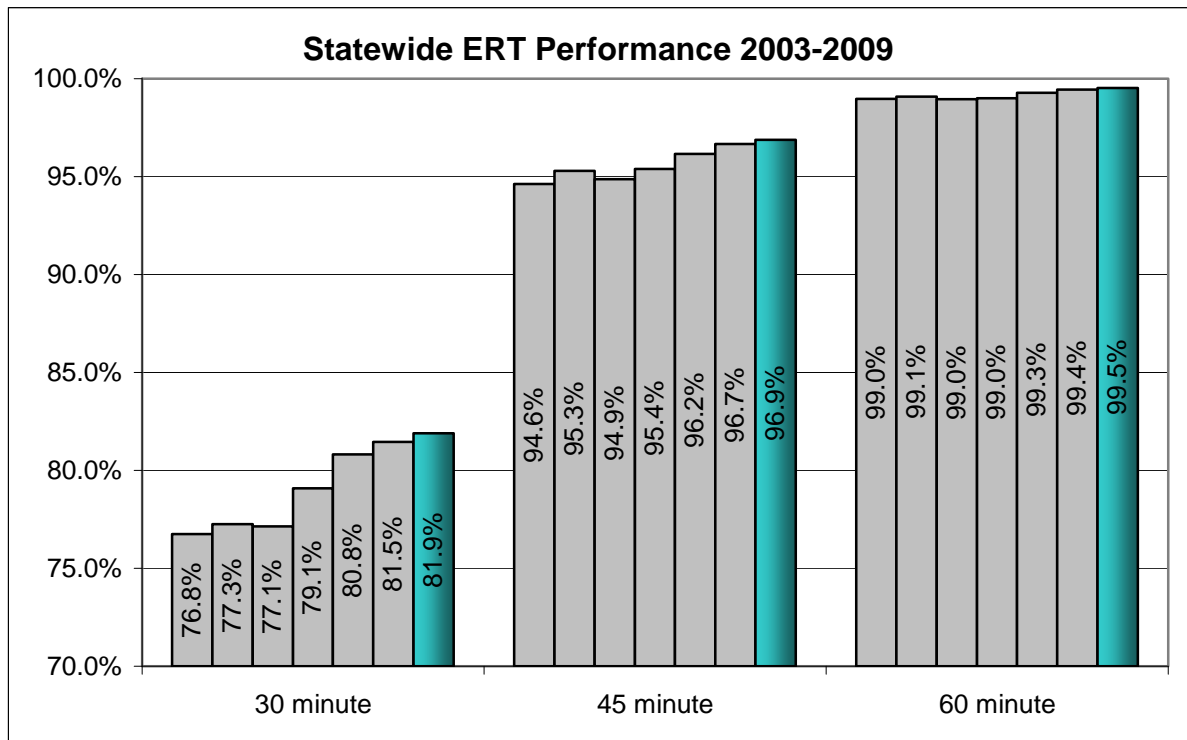
<sup>8</sup> *Qualified personnel* is defined as company representatives who are properly trained and equipped to investigate gas leak and odor reports in accordance with accepted company procedures and 16 NYCRR §255.604 - Operator Qualification.

data. This is because LDCs must respond as if it is an actual gas emergency until proven otherwise.

Any LDC that does not meet one of the target response levels at 30, 45, or 60 minutes also provides additional data showing when the desired response level is actually achieved.

### 2009 Results and Analysis

**Figure #18** displays the collective annual statewide Emergency Response Time (ERT) performance for each goal since 2003, with 2009 performance presented in color. The statewide performance has improved for each goal over the past seven years with a 5.1% increase in the 30-minute goal, from 76.8% to 81.9%, leading the performance gains.



**Figure #18** - *Statewide ERT Performance for All Goals*

**Figure #19** presents data for calendar years 2003 through 2009 arranged by LDC and percentage of responses achieved within 30 minutes. Performances that did not meet the goal are shown in red.

	30 Minute						
	2003	2004	2005	2006	2007	2008	2009
Central Hudson	81.0%	78.6%	78.9%	83.0%	84.1%	82.5%	81.6%
Coning	77.0%	83.5%	82.2%	82.4%	74.7%	79.3%	81.0%
Con Edison	71.9%	75.9%	76.4%	78.5%	80.3%	80.8%	80.8%
NGrid LI	67.9%	74.8%	75.3%	76.2%	75.8%	76.5%	76.5%
NGrid NY	67.6%	68.0%	65.9%	69.7%	74.3%	77.0%	77.2%
NFG	87.1%	87.4%	88.5%	91.1%	91.4%	88.7%	89.8%
NGrid Upstate	76.8%	80.8%	79.4%	82.2%	82.0%	82.3%	84.0%
NYSEG	80.4%	81.1%	81.5%	78.0%	78.9%	79.9%	81.9%
O&R	68.0%	71.7%	72.5%	78.4%	80.3%	80.7%	81.0%
RG&E	95.0%	95.1%	95.3%	92.8%	92.4%	92.3%	92.4%
St. Lawrence	72.4%	78.6%	81.1%	80.6%	78.9%	80.2%	82.7%

**Figure #19** - *Response Times for 30-Minute Goal*

All LDCs reached the 30-minute goal, with only one of the 11 LDCs declining compared to its 2008 performance level. This is the second consecutive year over the seven year period that NGrid NY met the 30-minute goal. It has made a significant improvement since 2006, and further improved during 2009.

NGrid Upstate, NYSEG, O&R, and St. Lawrence reached their highest performance level in the 30-minute target over the seven years.

All LDCs met the 45-minute and 60-minute goals. The data for the 45-minute and 60-minute targets are provided in Appendix B.

Over the seven years of the collected data, leak and odor calls statewide have decreased from 227,905 in 2003, to 163,963 in 2009, or a nearly 28% decrease over the

period. The number of calls did increase slightly during 2007, but that appears to be an anomaly as calls have continued the downward trend in 2008 and 2009. It is difficult to pinpoint an exact reason for the declining number of leak and odor calls, however, the LDCs indicate it may be due in part to the increased public awareness efforts by the LDCs delineating former affiliated company operations (i.e. appliance and service businesses) with those from gas distribution activities, and also the greater efforts LDCs are taking to minimize potentially hazardous leaks through the year. This will be discussed further under the Leak Management section.

It is encouraging to see that all LDCs have made the efforts over the years to reach the statewide goals jointly established for this measure. Staff expects all LDCs to continue to evaluate and monitor their performance and identify areas where best practices can be implemented. Another area LDCs should continue to monitor and strive to improve is response times that exceed 60 minutes. Statewide, approximately 0.47% of calls fall into this category, the best performance since data has been collected.

For 2009 Staff requested LDCs to provide emergency response data by operating area in order to obtain a more granular view of LDC response performance. Since the data was collected by LDC operating area,<sup>9</sup> the data points varied greatly between LDCs, but still allowed Staff to obtain a greater understanding of the macro level data normally collected. Generally speaking, most LDCs reached the response goals in individual operating areas.

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<sup>9</sup> Geographical area designated by the LDC for normal centralized operations activities.

In the cases where LDCs did not meet the response goals, those areas were more spread out than congested urban areas. The distance, lower number and density of customers, and fewer call volumes all contributed to the greater response times. Most of the areas were reaching at least 72% of calls within 30 minutes, and obtaining the 75% levels during the 31<sup>st</sup> minute. Staff recommends that LDCs evaluate different regions or areas in their distribution systems where response times are below those in the rest of their system, and develop plans for improvement.

### **Leak Management**

The intent of evaluating LDCs' leak management programs is to gauge performance in reducing the number of leaks that occur, eliminating potentially hazardous leaks that are found, and reducing the backlog<sup>10</sup> of leaks at the end of the year. The natural gas safety regulations contained in 16 NYCRR Part 255 contain requirements for classifying, monitoring and repairing different types of leaks. The regulations contain a scheme to classify these leaks according to the relative hazard, considering factors such as whether gas migration is detected near buildings, in manholes, vaults or catch basins, or under paved versus unpaved areas, etc. All leaks classified as potentially hazardous must be monitored and repaired according to the gas safety regulations, and any hazardous conditions must be eliminated immediately.

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<sup>10</sup> A backlog is defined as potentially hazardous active leaks in the system, consisting of Type 1 - requires immediate effort to protect life and property, continuous action to eliminate the hazard, and repairs on a day-after-day basis or the condition kept under daily surveillance until corrected; Type 2A - monitored every two weeks and repaired within six months; Type 2 - monitored at least every two months and repaired within one year.

Unrepaired potentially hazardous leaks are an increased safety risk in LDCs' systems. The risk is further increased when there is frost in the ground due to the increased chance of gas migration into buildings, because the gas cannot vent through the ground to the atmosphere as readily due to the blanket of frost. Although a leak backlog on any particular day is a snapshot in time, the end of a calendar year is significant since it is typically the beginning of the frost season. Thus, all data analyses are presented as of December 31, 2009 (data as reported by the LDCs used in analyses are contained in Appendix C). The leak management measure looks at the year-end backlog of leaks requiring repair. This measure does not substitute for, and is not a reflection upon any LDCs' compliance with the gas safety regulations.

The data reported by the LDCs includes leaks found, and leaks repaired on mains and services categorized by:

- Leaks discovered by type of leak
- Leaks repaired on mains by type and pipe material
- Leaks repaired on services by type and pipe material
- Backlog of leaks by type

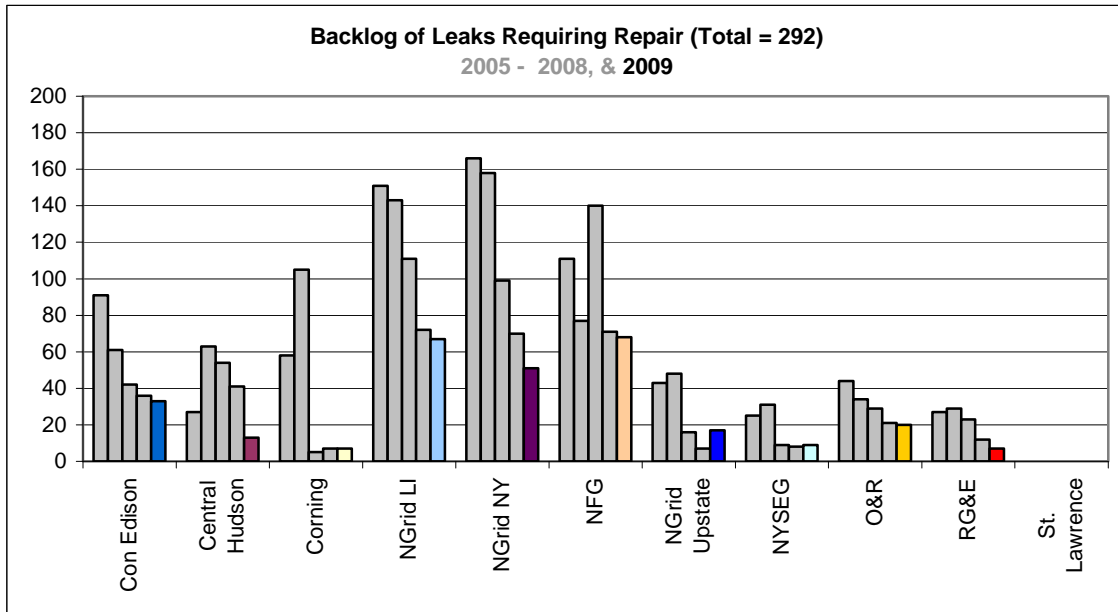
Analysis of leakage data can also provide an indication of the pipe material's susceptibility to leakage. As one means of continuously improving leak management programs, Staff encourages the identification and removal of leak-prone pipe, such as cast iron and bare or poorly coated steel pipe that is difficult to protect against corrosion. Incentive programs to reduce safety risks by replacing deteriorating and leak-prone infrastructure and/or reducing leak backlogs have been

incorporated into past and current rate agreements for LDCs. The long-term goal is to eliminate pipeline infrastructure that, due to its vulnerability to leaks, presents greater safety risks to the public. As the aging pipe infrastructure is replaced by more modern materials, general leak concerns should decrease over time. During 2010 the LDCs across the state collectively plan to remove over 310 miles of leak-prone main.

### 2009 Results and Analysis

The statewide year-end backlog of leaks requiring repair is declined from 1154 in 2003 to 292 in 2009, a 75% drop. This demonstrates that LDCs are paying more attention to managing leak surveys and completing them earlier in the year to allow for time to repair discovered leaks before heading into the frost season. Of note are the improvements since 2003 of NGrid Upstate (89%), NGrid LI (84%), NYSEG (83%), and RG&E (78%).

**Figure #20** displays the backlog of leaks requiring repair (Types 1, 2A, and 2) on December 31<sup>st</sup> of 2005 through 2009. The total year-end backlog of leaks requiring repair across the state decreased from 345 in 2008 to 292 in 2009 (-15.4%) Numerical leak data is contained in Appendix D.



**Figure #20** - Leak Backlog 2005 - 2009

As indicated in **Figure #20**, those with significant improvements in year-end backlogs during 2009 are Central Hudson (68%) and RG&E (42%). NGrid NY also achieved a notable improvement (27%). Con Edison, NGrid LI, and O&R also continued their trend of reducing their year-end backlogs by lowering the number of unrepaired leaks in each of the past five or more years. St. Lawrence continues to maintain its year-end backlog at zero.

After experiencing two years of significant increases in its leak backlog, Corning has maintained a fairly level backlog of less than 10 leaks since 2007. Its aggressive leak-prone pipe replacement program has helped it get ahead of and maintain control over its backlog of potentially hazardous leaks.

Central Hudson improved its leak backlog at the end of 2009 for the third year compared to its 2006



backlog. It was identified in three consecutive reports as needing to improve its management of repairable leaks, and achieved a significant improvement during 2009.

NGrid Upstate experienced an increase in its 2009 backlog over its 2008 backlog, which was its lowest ever. NGrid Upstate will be monitored in successive reports to determine if can maintain its backlog level or if it continues to deteriorate.

Both NGrid LI and NGrid NY were identified as outliers in the report on 2006 performance. Both made notable improvements during 2007 and continued improvement during 2008 and 2009. However, Con Edison, another downstate LDC with a large urban environment, has continually achieved an even lower backlog over the past several years. Staff recommends that NGrid LI and NGrid NY continue to evaluate approaches to minimizing potentially hazardous leaks at year-end, and continue to take actions to improve.

NFG has had two instances where its year-end backlog increased significantly, the latest being in 2007. During 2008 it was able to reduce its backlog to nearly half its 2007 level, and improved slightly more during 2009. Staff acknowledges NFG's effort, but even with the improvement, NFG continues to have one of the highest leak backlog levels in the state. Staff recommends that NFG continue to make efforts to reduce the number of potentially hazardous leaks at year-end.

## CONCLUSION

Natural gas is a safe and reliable energy product, if handled and transported properly. Safety performance measures are an important management tool that provides Staff and LDCs the ability to evaluate trends in key areas of gas safety (damage prevention, emergency response time, and leak management). The LDCs must continue to focus on these areas to maintain an adequate level of safety and to further reduce safety risks in distributing natural gas to consumers.

Over the past seven years LDCs have collectively worked to improve performance in the key areas of safety identified in this report. There has been a 62% improvement in total damage performance, the 30-minute emergency response time has improved from 76.8% in 2003 to 81.9% in 2009, and the year-end leak backlog of potentially hazardous leaks has decreased 75%, from 1,154 to 292. As LDCs continue their outreach efforts, adopt better practices in responding to leak and odor calls, and work to replace aging leak-prone infrastructure, Staff expects further improvement will occur.

Staff will continue to evaluate LDCs' performance via the measures contained in this report and expects those LDCs, mentioned as having improvement opportunities, to provide the Safety Section of the Office of Electric, Gas and Water with specific details on how they plan to improve. It is recommended that those LDCs evaluate their current and past practices, as well as reach out to other LDCs that experience higher performance levels to determine what incremental, and if necessary, entirely new approaches to pursue in order to realize improvement. It is further

encouraged that those LDCs that were able to make significant improvements respond to this report and share best practices which enabled them to obtain such improvement. Staff will continue to meet with LDCs on a regular basis and monitor LDC performance. Performance trends are discussed with LDCs at those meetings and will be analyzed in future performance measure reports.

### **Recommendations**

For each of the measures listed below, it is recommended that the LDCs identified self-assess their performance. They should take into consideration the analyses and recommendations in this report, and respond with improved action plans outlining incremental efforts on how they will work to improve performance in the future.

- Total damages - NGrid Upstate
- Mismatch damages - NGrid NY, NGrid Upstate, and NFG
- No-call damages - O&R
- Company & Company Contractor damages - Central Hudson, Con Edison, Corning, and O&R
- Excavator Error damages - Corning, NFG, NGrid Upstate, and St. Lawrence
- Leak Management - NGrid LI, NGrid NY, and NFG

## Appendix A

### Reported & Computed LDC Damage Performance

2009 LDC Reported Totals	# One Call Tickets						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	77,576	87,340	94,083	99,375	118,380	132,175	140,170
Central Hudson	14,979	17,869	18,854	21,024	21,171	22,931	18,670
Corning	2,045	2,750	3,273	3,093	2,558	4,644	4,380
NGrid LI	70,718	83,137	80,402	94,156	105,488	119,216	149,860
NGrid NY	56,132	63,335	66,184	65,838	75,164	87,895	94,117
NFG	71,772	68,887	76,142	80,690	86,281	105,292	91,786
NGrid Upstate	73,613	77,667	87,517	91,286	85,985	84,857	85,165
NYSEG	51,252	48,590	60,046	66,178	61,629	67,772	56,134
O&R	17,274	17,512	18,995	22,559	22,395	25,389	23,690
RG&E	43,550	52,513	52,108	51,712	54,854	69,836	52,313
St. Lawrence	2,268	2,604	2,653	2,692	2,433	2,896	3,190

Damages due to Mismarks						
2003	2004	2005	2006	2007	2008	2009
53	53	70	57	47	53	51
9	13	14	21	17	4	5
5	3	0	1	1	1	0
70	88	98	80	73	81	85
94	114	83	81	67	52	60
100	96	115	88	93	88	79
140	94	158	156	95	57	64
36	41	35	17	25	21	20
21	19	23	13	23	14	10
20	24	24	15	22	14	17
1	1	1	2	0	1	0

2009 LDC Computed Performance	# One Call Tickets						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	77,576	87,340	94,083	99,375	118,380	132,175	140,170
Central Hudson	14,979	17,869	18,854	21,024	21,171	22,931	18,670
Corning	2,045	2,750	3,273	3,093	2,558	4,644	4,380
NGrid LI	70,718	83,137	80,402	94,156	105,488	119,216	149,860
NGrid NY	56,132	63,335	66,184	65,838	75,164	87,895	94,117
NFG	71,772	68,887	76,142	80,690	86,281	105,292	91,786
NGrid Upstate	73,613	77,667	87,517	91,286	85,985	84,857	85,165
NYSEG	51,252	48,590	60,046	66,178	61,629	67,772	56,134
O&R	17,274	17,512	18,995	22,559	22,395	25,389	23,690
RG&E	43,550	52,513	52,108	51,712	54,854	69,836	52,313
St. Lawrence	2,268	2,604	2,653	2,692	2,433	2,896	3,190

Damages due to Mismarks (per 1000 Tickets)						
2003	2004	2005	2006	2007	2008	2009
0.68	0.61	0.74	0.57	0.40	0.40	0.36
0.60	0.73	0.74	1.00	0.80	0.17	0.27
2.44	1.09	0.00	0.32	0.39	0.22	0.00
0.99	1.06	1.22	0.85	0.69	0.68	0.57
1.67	1.80	1.25	1.23	0.89	0.59	0.64
1.39	1.39	1.51	1.09	1.08	0.84	0.86
1.90	1.21	1.81	1.71	1.10	0.67	0.75
0.70	0.84	0.58	0.26	0.41	0.31	0.36
1.22	1.08	1.21	0.58	1.03	0.55	0.42
0.46	0.46	0.46	0.29	0.40	0.20	0.32
0.44	0.38	0.38	0.74	0.00	0.35	0.00

2009 LDC Reported Totals	No-Call Damages						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	62	107	110	85	84	47	41
Central Hudson	42	14	25	11	18	19	14
Corning	5	11	1	0	1	0	0
NGrid LI	214	296	270	295	201	133	100
NGrid NY	107	110	131	96	78	78	49
NFG	127	132	144	95	104	96	71
NGrid Upstate	129	115	139	93	67	74	51
NYSEG	54	39	34	27	28	20	19
O&R	52	41	44	39	48	31	28
RG&E	85	62	53	52	36	35	15
St. Lawrence	9	5	3	2	5	3	0

Co. & Co. Contractor Damages						
2003	2004	2005	2006	2007	2008	2009
47	37	30	24	34	46	34
2	2	1	5	6	9	9
0	0	0	0	0	0	4
24	34	14	15	5	8	3
12	9	8	4	7	3	4
7	13	18	11	6	6	2
13	23	12	10	7	11	6
5	0	5	5	10	2	1
13	37	25	18	21	7	8
7	8	13	7	6	3	4
0	1	0	0	0	0	1

2009 LDC Computed Performance	No-Call Damages (per 1000 Tickets)						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	0.80	1.23	1.17	0.86	0.71	0.36	0.29
Central Hudson	2.80	0.78	1.33	0.52	0.85	0.83	0.75
Corning	2.44	4.00	0.31	0.00	0.39	0.00	0.00
NGrid LI	3.03	3.56	3.36	3.13	1.91	1.12	0.67
NGrid NY	1.91	1.74	1.98	1.46	1.04	0.89	0.52
NFG	1.77	1.92	1.89	1.18	1.21	0.91	0.77
NGrid Upstate	1.75	1.48	1.59	1.02	0.78	0.87	0.60
NYSEG	1.05	0.80	0.57	0.41	0.45	0.30	0.34
O&R	3.01	2.34	2.32	1.73	2.14	1.22	1.18
RG&E	1.95	1.18	1.02	1.01	0.66	0.50	0.29
St. Lawrence	3.97	1.92	1.13	0.74	2.06	1.04	0.00

Co. & Co. Contractor Damages (per 1000 Tickets)						
2003	2004	2005	2006	2007	2008	2009
0.61	0.42	0.32	0.24	0.29	0.35	0.24
0.13	0.11	0.05	0.24	0.28	0.39	0.48
0.00	0.00	0.00	0.00	0.00	0.00	0.91
0.34	0.41	0.17	0.16	0.05	0.07	0.02
0.21	0.14	0.12	0.06	0.09	0.03	0.04
0.10	0.19	0.24	0.14	0.07	0.06	0.02
0.18	0.30	0.14	0.11	0.08	0.13	0.07
0.10	0.00	0.08	0.08	0.16	0.03	0.02
0.75	2.11	1.32	0.80	0.94	0.28	0.34
0.16	0.15	0.25	0.14	0.11	0.04	0.08
0	0.38	0.00	0.00	0.00	0.00	0.31

2009 LDC Reported Totals	Excavator Error Damages						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	129	88	81	70	133	118	92
Central Hudson	62	57	38	30	22	25	15
Corning	5	12	16	15	9	3	9
NGrid LI	204	125	126	86	112	115	119
NGrid NY	272	273	295	207	170	143	110
NFG	208	224	212	208	196	179	176
NGrid Upstate	374	294	404	283	276	225	224
NYSEG	104	113	107	67	90	63	57
O&R	87	72	57	59	68	56	27
RG&E	121	98	89	66	87	75	66
St. Lawrence	10	7	4	4	7	7	21

Total Damages						
2003	2004	2005	2006	2007	2008	2009
291	285	291	236	287	264	218
115	86	78	67	63	57	43
15	26	17	16	11	4	13
512	543	508	476	391	337	307
485	506	517	388	322	276	223
442	465	489	402	399	369	328
656	526	713	542	445	367	345
199	193	181	116	153	106	97
173	169	149	129	160	108	73
233	192	179	140	151	127	102
20	14	8	8	12	11	22

2009 LDC Computed Performance	Excavator Error Damages (per 1000 Tickets)						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	1.66	1.01	0.86	0.70	1.12	0.89	0.66
Central Hudson	4.14	3.19	2.02	1.43	1.04	1.09	0.80
Corning	2.44	4.36	4.89	4.85	3.52	0.65	2.05
NGrid LI	2.88	1.50	1.57	0.91	1.06	0.96	0.79
NGrid NY	4.85	4.31	4.46	3.14	2.26	1.63	1.17
NFG	2.90	3.25	2.78	2.58	2.27	1.70	1.92
NGrid Upstate	5.08	3.79	4.62	3.10	3.21	2.65	2.63
NYSEG	2.03	2.33	1.78	1.01	1.46	0.93	1.02
O&R	5.04	4.11	3.00	2.62	3.04	2.21	1.14
RG&E	2.78	1.87	1.71	1.28	1.59	1.07	1.26
St. Lawrence	4.41	2.69	1.51	1.49	2.88	2.42	6.58

Total Damages (per 1000 Tickets)						
2003	2004	2005	2006	2007	2008	2009
3.75	3.26	3.09	2.37	2.42	2.00	1.56
7.68	4.81	4.14	3.19	2.98	2.49	2.30
7.33	9.45	5.19	5.17	4.30	0.86	2.97
7.24	6.53	6.32	5.06	3.71	2.83	2.05
8.64	7.99	7.81	5.89	4.28	3.14	2.37
6.16	6.75	6.42	4.98	4.62	3.50	3.57
8.91	6.77	8.15	5.94	5.18	4.32	4.05
3.88	3.97	3.01	1.75	2.48	1.56	1.73
10.02	9.65	7.84	5.72	7.14	4.25	3.08
5.35	3.66	3.44	2.71	2.75	1.82	1.95
8.82	5.38	3.02	2.97	4.93	3.80	6.90

## Appendix B

### Reported Emergency Response Data

	45 Minute							60 Minute						
	2003	2004	2005	2006	2007	2008	2009	2003	2004	2005	2006	2007	2008	2009
Central Hudson	99.2%	98.8%	98.8%	98.7%	99.0%	99.0%	99.1%	99.9%	99.9%	99.9%	99.8%	99.9%	99.9%	100.0%
Coning	93.0%	96.1%	93.9%	95.8%	89.2%	96.1%	97.1%	98.0%	99.6%	96.8%	99.2%	97.1%	98.7%	98.7%
Con Edison	96.3%	97.3%	97.1%	97.6%	97.4%	97.8%	97.9%	99.9%	99.9%	99.9%	99.9%	99.7%	99.9%	99.97%
NGrid LI	93.1%	96.0%	96.2%	96.1%	95.5%	95.6%	95.7%	99.9%	99.9%	99.9%	99.9%	99.8%	99.6%	99.7%
NGrid NY	92.2%	92.4%	90.6%	91.8%	95.1%	96.6%	96.6%	98.1%	98.4%	97.9%	97.8%	99.3%	99.7%	99.6%
NFG	96.1%	96.3%	96.8%	97.0%	97.2%	96.3%	97.1%	98.9%	98.9%	99.0%	99.0%	99.1%	98.8%	99.2%
NGrid Upstate	92.1%	94.1%	93.6%	95.1%	94.8%	95.5%	95.9%	97.2%	98.0%	98.0%	98.6%	98.2%	98.7%	98.8%
NYSEG	96.2%	96.0%	96.0%	94.5%	95.0%	95.7%	96.1%	99.4%	99.4%	99.2%	98.8%	99.1%	99.3%	99.3%
O&R	94.2%	95.8%	95.1%	96.7%	97.1%	97.5%	97.8%	99.7%	99.7%	99.5%	99.9%	99.9%	99.9%	99.9%
RG&E	99.3%	99.5%	99.4%	98.9%	98.9%	98.8%	98.9%	99.9%	99.9%	99.8%	99.8%	99.9%	99.8%	99.8%
St. Lawrence	89.0%	91.0%	95.3%	95.5%	95.4%	96.3%	96.1%	98.2%	98.5%	99.2%	99.2%	98.9%	99.6%	99.6%

# Calls	2003	2004	2005	2006	2007	2008	2009
Central Hudson	4,587	4,724	4,999	4,075	4,442	3,752	3,485
Coning	716	722	1,487	1,036	1,432	1,279	1,102
Con Edison	31,749	33,527	30,478	28,356	29,880	26,003	25,834
NGrid LI	30,593	28,459	27,922	25,034	23,486	21,605	20,966
NGrid NY	64,431	59,046	53,200	49,034	47,688	43,253	42,036
NFG	33,288	30,207	29,543	25,743	27,740	26,558	26,016
NGrid Upstate	28,602	27,507	25,206	22,682	23,465	21,681	20,601
NYSEG	10,210	9,487	9,999	8,995	9,828	8,395	7,923
O&R	8,231	8,260	8,033	7,656	7,820	6,982	6,249
RG&E	14,882	14,248	13,917	12,123	12,185	11,475	9,261
St. Lawrence	616	590	493	396	436	481	490
<b>Total:</b>	<b>227,905</b>	<b>216,777</b>	<b>205,277</b>	<b>185,130</b>	<b>188,402</b>	<b>171,464</b>	<b>163,963</b>



**Appendix C**

Reported Leak Data

2009 Total Leak Repairs on Mains by Type								
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,485	48	0	0	22	2,902	0	0
Central Hudson	90	0	0	87	20	105	0	0
Corning	118	0	0	0	0	0	0	0
NGrid LI	685	110	10	25	57	226	0	0
NGrid NY	84	0	0	32	18	1,948	0	0
NFG	2,036	0	0	86	94	251	0	11
NGrid Upstate	74	41	0	72	40	518	0	95
NYSEG	117	0	0	17	13	0	0	4
O&R	156	0	0	8	53	13	0	0
RG&E	127	15	0	182	16	15	0	0
St. Lawrence	0	0	0	1	0	0	0	0

2009 Total Leak Repairs on Services by Type								
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,240	142	0	1	199	0	136	0
Central Hudson	0	60	0	64	19	0	0	0
Corning	50	0	0	0	1	0	0	0
NGrid LI	1,002	176	22	37	212	0	17	0
NGrid NY	213	0	0	111	70	0	126	0
NFG	506	0	0	83	104	0	0	15
NGrid Upstate	270	49	0	125	216	12	12	128
NYSEG	154	0	0	34	47	0	0	2
O&R	184	0	0	10	68	0	0	0
RG&E	54	21	0	124	43	0	12	0
St. Lawrence	0	0	0	7	5	0	0	0

**Appendix D**

Backlog of Leaks Requiring Repair

LDC	Leak Backlog - Type 1, 2, and 2a						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	98	106	91	61	42	36	33
Central Hudson	30	14	27	63	54	41	13
Corning	6	2	58	105	5	7	7
NGrid LI	419	177	151	143	111	72	67
NGrid NY	139	197	166	158	99	70	51
NFG	172	213	111	77	140	71	68
NGrid Upstate	151	56	43	48	16	7	17
NYSEG	52	11	25	31	9	8	9
O&R	55	47	44	34	29	21	20
RG&E	32	30	27	29	23	12	7
St. Lawrence	0	0	0	0	0	0	0
<b>Total:</b>	<b>1,154</b>	<b>853</b>	<b>743</b>	<b>749</b>	<b>528</b>	<b>345</b>	<b>292</b>

Repaired Leaks Requiring Repair

LDC	Leaks Repaired - Type 1, 2, and 2a						
	2003	2004	2005	2006	2007	2008	2009
Con Edison	7,769	7,498	6,445	6,312	7,509	5,800	6,592
Central Hudson	184	199	252	295	243	306	175
Corning	58	109	138	219	319	127	105
NGrid LI	6,327	4,127	3,730	3,359	2,651	2,282	2,325
NGrid NY	5,359	4,174	3,553	3,120	3,307	2,460	2,351
NFG	2,741	2,157	2,032	2,042	2,375	1,949	1,464
NGrid Upstate	1,407	1,446	1,212	1,067	1,264	1,033	1,316
NYSEG	665	713	432	385	148	242	207
O&R	456	716	528	499	374	362	339
RG&E	1,022	1,210	677	451	521	387	330
St. Lawrence	5	3	4	1	5	0	5