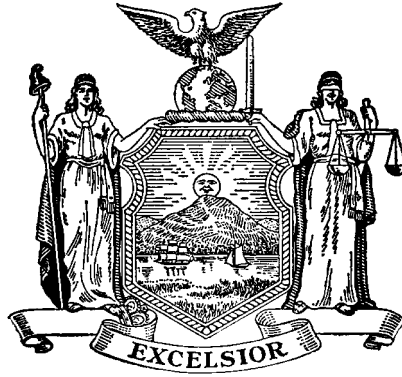


STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE



2006 GAS SAFETY
PERFORMANCE MEASURES REPORT
(CASE 07-G-0461)

Safety Section
Office of Gas & Water
June 1, 2007

EXECUTIVE SUMMARY

This report examines the New York State natural gas local distribution companies' (LDCs) 2006 performance in three areas pertaining to safety: damage prevention, emergency response, and leak management.

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, and this is the fourth year that the Office of Gas and Water has collected data according to these processes. Overall, the data indicate that LDC performance has substantially improved across the state.

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

Overall, damage prevention performance across the state improved approximately 24.6% during 2006. The number of requests to locate underground gas facilities (tickets) received by the utilities increased by 6.8%, which is most likely attributable to a combination of improved compliance by excavators and an increase in construction activity. Each of the four categories improved at least 20%. Staff attributes these positive results in part, to public education efforts undertaken by both the LDCs and the One-Call centers, and the Commission's enforcement process for

non-compliance with its regulations protecting underground facilities. Despite overall statewide improvement, a few LDCs experienced increased damages within one or more of the four categories of damages described above.

National Grid, Inc.'s (NGrid) performance in the area of mismarks (failure to accurately mark the location of underground facilities) improved slightly in 2006, mainly due to implementing tighter controls over its locating contractor. However, NGrid remains an outlier in this measure with the lowest level of performance among the LDCs, and needs to continue focusing its attention and make efforts to improve significantly in this performance measure.

Damages caused by mismarks is an area where LDCs have more control over their level of performance than they would relative to excavator error and no-calls damages. 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.

NGrid's and KeySpan Energy Delivery of New York's (KED NY) performance significantly improved in the excavator error measure. However, these two LDCs, in addition to Corning Natural Corporation (Corning), continue to have considerable room for improvement. KeySpan Energy Delivery of Long Island (KED LI) had a slight improvement in the no-call measure, but it continues to experience more than double this type of damage than most of the other LDCs. Although LDC performance in these two measures is dependent on the behavior of outside parties, improvements are achievable through outreach efforts such as excavator education and safety programs, recovery of repair costs,

and providing information to Staff for potential enforcement actions. Staff anticipates that the implementation of public outreach efforts associated with the rollout of the 811 three-digit dialing initiative will lead to better performance in the future.

Damages due to company and company contractors also showed an improvement statewide during 2006. Although O&R has improved in this area during the last two years, it continues to experience a significantly higher rate of these types of damages than any other LDC. Similar to mismatch damages, this is an area where LDCs have more control over their own performance. O&R needs to identify additional efforts and approaches to bring this safety measure in line with the other LDCs.

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% within 60 minutes. Response performance generally improved across the state in 2006. Staff attributes this progress to LDCs adopting more efficient work practices, utilization of new technologies such as global positioning systems (GPS) to quickly identify the most appropriate employee to respond to an emergency notification, fewer leak and odor calls, 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.

All LDCs are meeting the 45-minute and 60-minute response goals, and all except KED NY are meeting the 30-

minute goal. O&R's performance has shown steady improvement since 2003 and it met the target for the first time during 2006. However, KED NY's 2006 performance continues to fall well short of the 75%-within-30-minutes goal and has the lowest level of achievement among the LDCs. KED NY's actions to improve in this area apparently have not had a significant impact thus far, indicating that it should develop and implement additional approaches to improve response times. Staff has had discussions with KED NY about the emergency response issue. It has committed to the implementation of GPS, but has recently only begun a pilot program, and has not yet committed to a timeframe for full implementation. It is expected that this technology will provide benefits in both emergency response capability as well as foster other improvements in work efficiency. Staff expects KED NY to implement GPS technology as soon as possible and is recommending it respond with a comprehensive implementation schedule for the rollout of this initiative.

The third measure, leak management, examines LDCs' performance in effectively maintaining leak inventories and keeping potentially hazardous leaks to a minimum. The measure looks at 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. The net result statewide for year-end 2006 is a less than 1.0% increase in the number of leaks requiring repair compared to year-end 2005. Two LDCs that experienced significant increases in leak backlog were Central Hudson and Corning. Many LDCs

that experienced reductions in year-end backlog attribute the decrease to completing mandatory leak surveys earlier in 2006, leaving more time to complete the repairs by the end of the year. According to the LDCs, this facilitates the management of leak repair activity heading into the winter months.

KED LI and KED NY continue to have relatively high repairable leak backlogs when heading into the winter season. These two LDCs are recommended to address their leak backlog issues and work to reduce outstanding repairable leaks by the end of the year.

The analysis of each performance measure identifies specific areas where certain LDCs have room for improvement. It is recommended that those LDCs perform a self-analysis in these areas and develop action plans to improve performance. In some cases, Staff suggests certain issues to examine, although the LDC 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. Those LDCs identified as having room for improvement within the various measures will be asked to respond within 45 days describing action plans to improve performance.

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COMPANY ACRONYMS

Company	Acronym in Report
Central Hudson Gas & Electric Corporation	Central Hudson
Consolidated Edison Company of New York, Inc.	Con Edison
Corning Natural Gas Corporation	Corning
KeySpan Energy Delivery Long Island	KED LI
KeySpan Energy Delivery New York City	KED NY
National Fuel Gas Distribution Corporation	NFG
New York State Electric & Gas Corporation	NYSEG
National Grid, Inc.	NGrid
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 by Staff as a means of effectively improving gas delivery system safety by measuring local distribution companies' (LDCs) 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 2006

Throughout this report, all of the figures display performance results for 2003-2006 for each LDC with the grey columns in the bar graphs representing 2003-2005, and the color columns representing 2006 results. Red numbers in tables represent failure to meet the target level for the measure or a decline in performance from the previous year.

Damage Prevention

Damage due to excavation activity is the leading cause of 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 mismarks¹
- damages resulting from excavator error
- damages resulting from company and company contractors
- damages resulting from "no-calls"

Each one-call ticket received provides an LDC the opportunity to mark its facilities correctly. Hence, the 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. Historically, this metric makes up the largest percentage of damages to LDCs' facilities.

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.

¹ A mismatch is a failure to accurately mark the location of underground facilities.

No-call damages 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 2006, more than 99.5% of one-call tickets resulted in no damages to natural gas facilities. There were a total of 2,520 damages to natural gas LDC facilities in 2006, 19.5% less than in 2005. When these damages are normalized with an increase of 38,346 one-call tickets (6.8%) during 2006, the result is a significant improvement in total damages per 1000 one-call tickets. The increase in one-call tickets is a sign that excavators may be gaining better awareness of the one-call system, and the possibility that more excavation work is being conducted, which would also represent more opportunities for damages. While these are encouraging statistics, a single damage could lead to a catastrophic event, so it is important that LDCs strive to minimize damage to facilities.

Recent legislation by the Federal Communications Commission (FCC) mandated the creation of a single nationwide three-digit telephone number that excavators can call to request the markout of underground facilities. The telephone number is 811 and will simplify the one-call process. The single telephone number will relieve

excavators from having to remember multiple phone numbers if they work in areas covered by different one-call centers. It will also facilitate national one-call education efforts and carry a message that is applicable no matter where excavators work in the country. The number officially became effective in April 2007, and the two One-Call Centers in New York State are participating.²



**Know what's below.
Call before you dig.**

2006 Damage Results and Analysis

The data for the damage prevention measure will first be addressed by taking a macro view across the state. The report will then examine individual metrics in an effort to perform closer analyses of LDCs' strengths and weaknesses.

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 as previously mentioned. Also take note of the significant improvement in the Total damages measure.

² Case 05-C-1413, DIG SAFELY NEW YORK, INC., NYC & LI ONE CALL/DIG SAFELY, INC., presented to the Commission on April 18, 2007.

Metric	2003	2004	2005	2006
# Tickets	481,179	522,204	560,257	598,603
Mismarks	1.14	1.05	1.11	0.89
Co. & Co. Contractor	0.27	0.31	0.22	0.17
Excavator Error	3.28	2.61	2.55	1.83
No-Calls	1.84	1.78	1.70	1.33
Total (per 1000)	6.53	5.75	5.59	4.21

Figure #1 - Damages per 1000 Tickets Statewide³

All four metrics composing the Total Damage measure improved over 20% from 2005. The greatest improvement in 2006 came in the Excavator Error measure. Every LDC improved in this measure as well as in the No-call measure. These are two areas where LDCs do not have as much direct control in performance as with damages due to Mismarks and Company & Company Contractors.

The continued improvement statewide for No-calls is an encouraging sign, particularly when correlated with the increase in One-Call tickets, which indicates that more excavators are becoming aware of their obligation to utilize the one-call system and excavate carefully. Staff expects continued improvement in this area as the 811 initiative is under way.

Damages due to Mismarks and Company & Company Contractor damages also improved during 2006, further contributing the overall improvement in the statewide total damages measure. Staff expects to see general improvement in these areas as LDCs develop greater experience and better controls over their direct contractors.

³ A reporting error was discovered for the Excavator Error measure in the 2003 through 2005 data and has been corrected.

The following section provides an overview of the total damages per 1000 one-call tickets experience by each LDC.

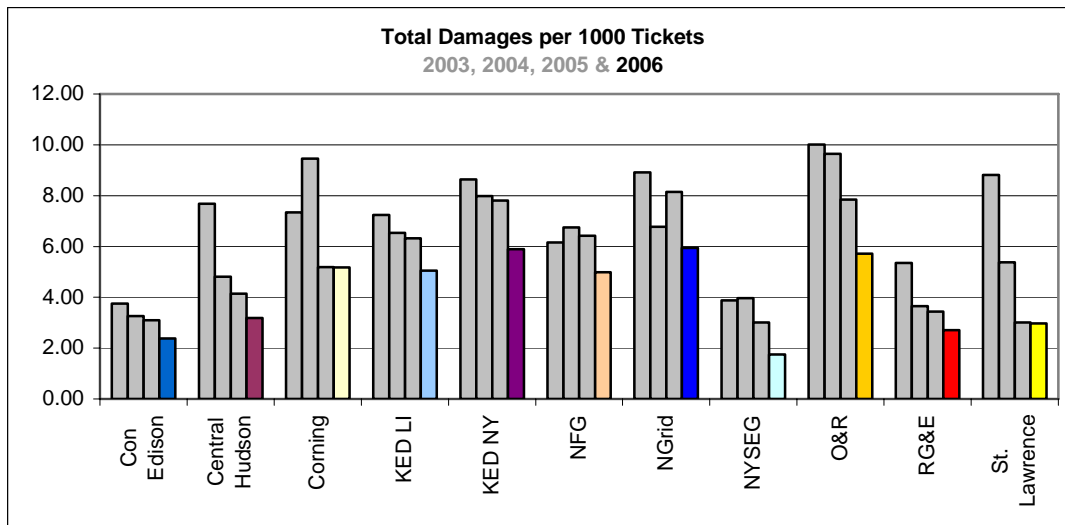


Figure #2 - Total Damages per 1000 Tickets

In the Total Damages per 1000 Tickets measure, all 11 LDCs improved over 2005, as seen in **Figure #2**. Nine of the LDCs experienced improvement greater than 21%. NYSEG improved approximately 42%, NGrid 27%, and O&R 27%. All LDCs are now performing at a rate of less than 6.00 total damages per 1000 Ticket requests.

As the individual components of the Total damages measure are discussed in the following sections of this report, the categories of damages with significant impacts on LDCs' performance will be identified.

Con Edison, Central Hudson, KED LI, KED NY, O&R, RGE, and St. Lawrence⁴ have all experienced declining total damage rates over the four year period. This is an

⁴ Due to Corning's and St. Lawrence's relatively small size and lower number of one-call tickets received, a single damage in any category can magnify its impact on performance considerably more than for other LDCs.

indication that LDC management has been focused on this issue.

All LDCs have improved performance since 2003. However, KED NY, NGrid, and O&R continue to have significant room for improvement. Staff recommends these LDCs perform self-assessments to identify improvement opportunities, including examining best-practices of other LDCs in these categories that operate in similar environments.

The components that comprise the total damage measure are illustrated in **Figures #3 - #6**. Each component is discussed in further detail under the corresponding **Figures**. Specific areas where LDCs perform well, or have room for improvement and should perform self-assessments, are identified.

Mismarks

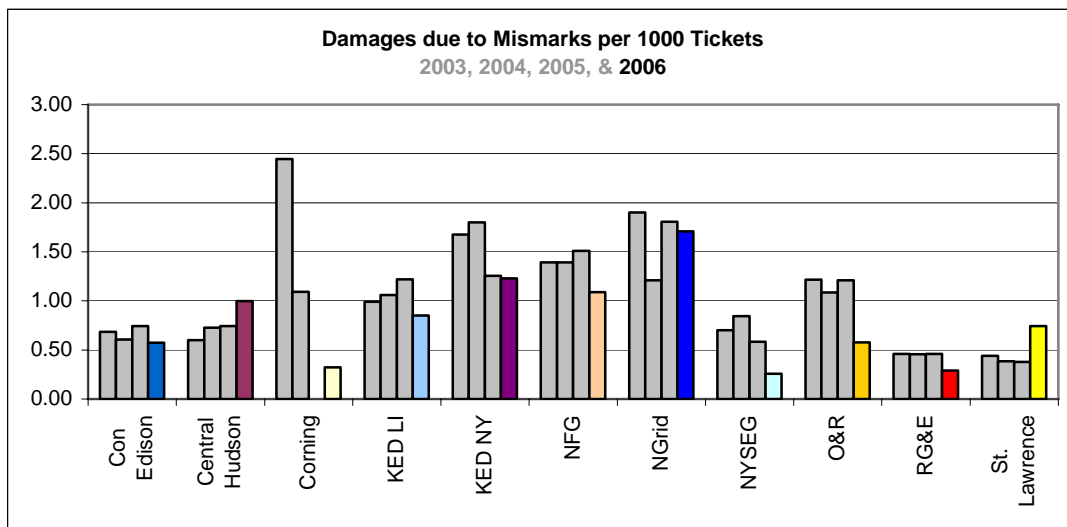


Figure #3 - Damages due to Mismarks

In the Mismarks measure, eight of the 11 LDCs experienced improved performance, as depicted in **Figure #3**.

During 2005, only four LDCs had improved performance over 2004. Both NYSEG and O&R improved performance greater than 50%. NGrid improved from 1.81 to 1.71 in 2005 and 2006, respectively but still has the lowest performance among the LDCs by a significant margin. KED NY improved slightly while NFG improved a greater amount over the same period. Despite these improvements, however, these three LDCs remain outliers in this measure.

Also noteworthy and a cause for concern is Central Hudson's slip in performance during 2006. Central Hudson's performance declined 34.5% over its 2005 performance. It has also declined in each year over the period. The lack of improvement calls into question the level of attention management is giving to this area of performance. Central Hudson should perform a self-analysis to address this area of concern.

Corning and St. Lawrence's declines during 2006 are each attributable to one mismark damage greater than experienced during 2005.

After O&R experienced a decline in performance during 2005 to near its 2003 level, it managed to significantly improve its performance during 2006. It appears that increased management attention and implementation of additional approaches, such as greater use of vacuum excavation⁵ and the development of an improved career path for locators to reduce turnover, have greatly benefited performance in this area.

⁵This excavation method uses either air or water to loosen soil so that it can be removed by a large vacuum device without damaging buried facilities. It is used to verify the location of the buried facilities in situations where it is difficult to locate them with the typical above-ground instruments and maps.

Con Edison, Conning, NYSEG, O&R, and RG&E all improved from 2005 performance levels. These LDCs remain among the best in the state.

Staff recommends that all the LDCs that experienced a drop in performance in 2005 perform an analysis of their facility locating programs to identify the reasons for these declines and actions that will be taken to decrease these types of damages.

The utility marking function is performed by either LDC personnel or by contractors hired by the LDC's. Therefore, this is an area where LDCs have more control over their level of performance than they would relative to excavator error and no-calls damages. Staff expects that through training, quality control, vendor procurement practices and increased management attention, the LDC's should achieve reductions in damages caused by mismarks.

Company & Company Contractors

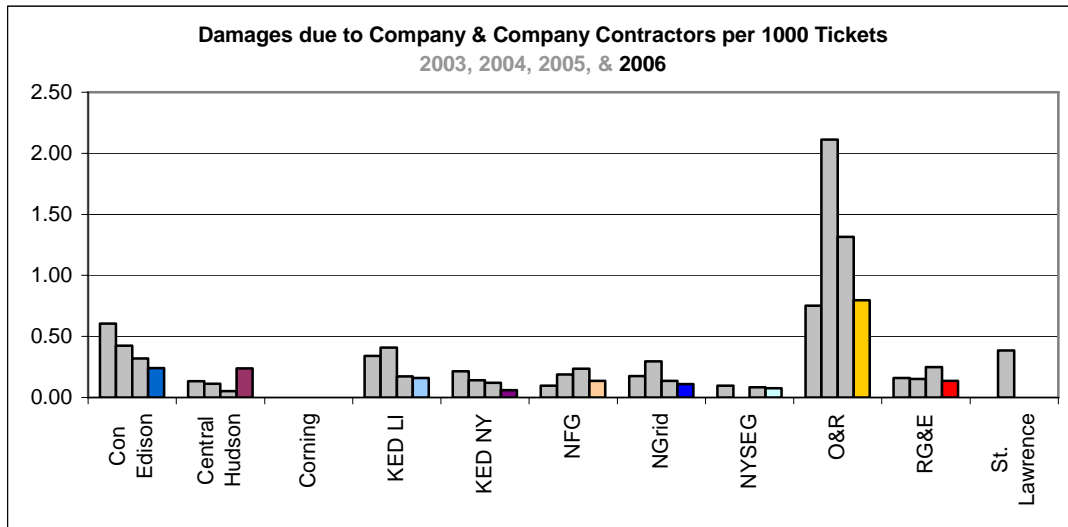


Figure #4 - Damages due to Company & Company Contractors⁶

Performance in damages related to Company and Company Contractors is shown in **Figure #4**. Ten of the 11 LDCs experienced improvement in this metric during 2006. LDCs experiencing significant improvements were KED NY (50% fewer damages per 1000 One-Call tickets), RG&E (46% fewer), NFG (42% fewer), and O&R (39% fewer).

Con Edison, and KED NY have all experienced improvement in each year over the period, which indicates that company management has focused on reducing these types of damages. In addition, St. Lawrence did not experience any company or company contractor damages in 2003, 2005, or 2006. After slipping in 2004, KED LI and NGrid continued improving during 2006. And for the fourth year, Corning did not report experiencing any damages relating to company and contractor excavation activities.

⁶LDCs 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.

Central Hudson is the only LDC that experienced deteriorated performance in 2006. Staff recommends that Central Hudson perform a self-assessment and address the reasons for the increase in damages caused by their own personnel and company contractors.

O&R experienced a drop in performance for this damage metric in 2004 compared to 2003, and implemented controls to mitigate these types of damages leading to an approximate 37% improvement in 2005. It continued its improvement during 2006 by improving approximately 39%, and performed at a level similar to its 2003 performance. Although O&R improved substantially in this area, it continues to experience a significantly higher rate of these types of damages than any other LDC. O&R needs to continue to focus on approaches to bring this safety measure in line with the other LDCs.

Similar to the utility locating function and its relation to mismarks, this is an area where the LDC's have more control over avoiding damages than they do with excavator error and no-call damages. Again, Staff expects that through training, quality control, contractor procurement practices and increased management attention, that LDC's should achieve reductions in these types of damages.

Excavator Error

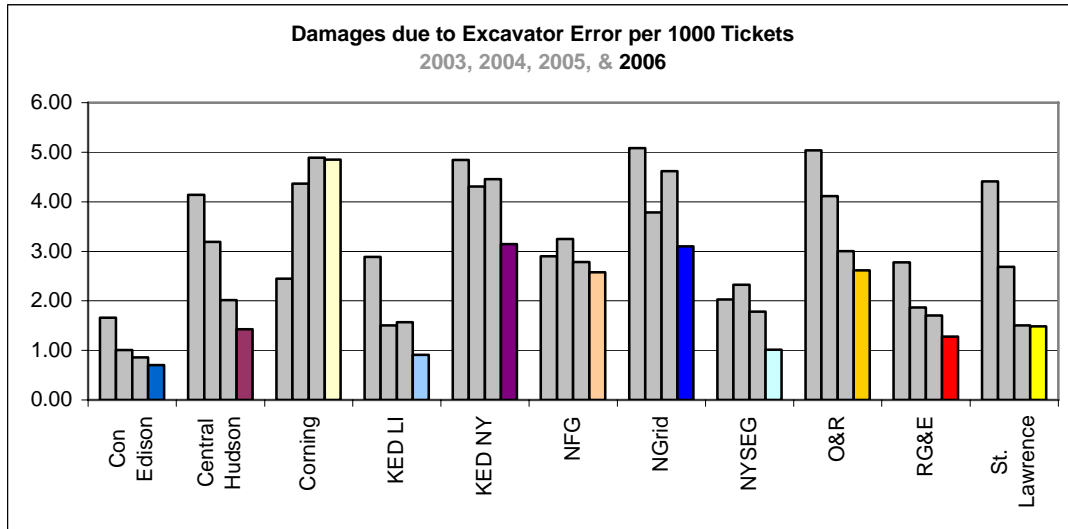


Figure #5 - *Damages due to Excavator Error*

In the Excavator Error measure, all 11 of the LDCs improved performance in 2006 as seen in **Figure #5**. Of the four metrics that make up the Total damage measure, damages due to Excavator Error improved the greatest during 2006; approximately 28%. NYSEG improved approximately 43%, KED LI 42%, NGrid 33%, KED NY 29%, and Central Hudson 29%. Con Edison, Central Hudson, O&R, RG&E, and St. Lawrence have all experienced improvement in each year over the period.

Excavator error damages are historically the largest component of total damages, partially because it entails the most effort to educate third-party contractors. To reduce no-call damages, for example, LDC's and one-call centers can promote the toll-free numbers and the three-digit nationwide number 811, and the straightforward "Call Before You Dig" message. 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 with 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. None-the-less, the performance results suggest that the excavation community is increasingly aware of safe excavation practices to follow after the markouts have been performed. Staff recognizes all of the LDCs, Dig Safely New York, and the New York City and Long Island One Call Center for their excavator outreach and education efforts.

After experiencing three years of continued deteriorated performance, Corning experienced a slight improvement during 2006. However, it remains far from its 2003 performance level and remains the lowest performer of all the LDCs. Staff recommends Corning take steps to enhance its outreach efforts to improve its performance in the future.

Other LDCs with room for further improvement regarding excavator error damages are: KED NY, NFG, NGrid, and O&R. This metric continues to be a significant driver of these LDCs' total damage performance and Staff recommends they perform a self-assessment to identify areas to improve outreach and education efforts.

No-Calls

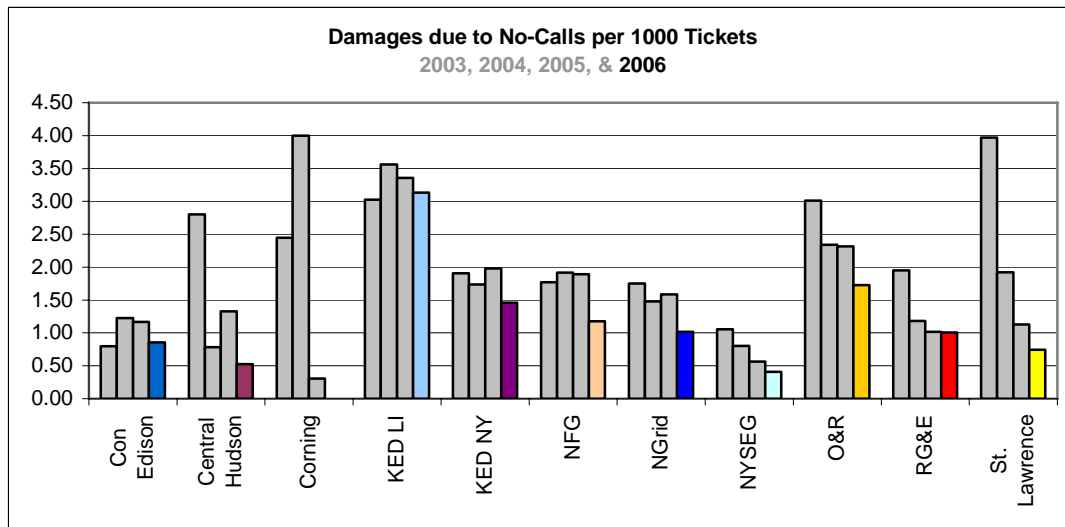


Figure #6 - Damages due to No-calls

All of the LDCs improved performance in damages due to no-calls in 2006. Corning reported experiencing no damages in 2006, down from one in 2005, and 11 in 2004. Nine LDCs experienced double-digit improvements with the greatest being Central Hudson at a greater than 60% improvement over its 2005 performance.

NYSEG, O&R, RG&E, and St. Lawrence have all experienced improvement in each year over the period. However, O&R, along with KED LI, have the most room for improvement. Staff recommends that these two LDCs perform an analysis to determine why LDCs with similar construction activity and overlapping or adjacent franchise areas experience significantly less damages related to no-calls, and determine actions management will take to improve performance.

The performance results generally indicate that the downstate LDCs appear to have the greatest occurrences of these types of damages. Although Con Edison has

significantly better performance than the other downstate LDCs, these damages still represent more than one-third of its total damages. Staff recommends the downstate LDCs examine this issue to determine if actions can be taken to improve performance in these types of damages. KED LI, in particular, should examine why it experiences more than double the rate of most other LDCs No-call damages and how it can improve its performance.

In order to aid in the enforcement of 16 NYCRR Part 753, *Protection of Underground Facilities* (Code Rule 753), Staff recently began working with the LDCs to have them voluntarily forward information about contractors who damaged underground facilities without having markout requests. As LDCs report to Staff the details of each damage and pertinent information regarding the excavator, Staff will take enforcement actions where appropriate. This will further contribute to reducing future damages by deterring non-compliance, steering excavators to obtain training in the use of the one-call system and Code Rule 753 requirements, and increase the impact of word-of-mouth communications among the excavating community. The 811 three-digit dialing initiative is also expected to lead to greater use of the one-call notification system.

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.⁷

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 dispatch to the time of arrival of qualified⁸ 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

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

⁸ *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.

gas, the event is nevertheless included in the reported 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.

2006 Results and Analysis

Figure #7 presents data for calendar years 2003 through 2006 arranged by LDC and percentage of responses achieved within 30 minutes. Performances that did not meet the target are shown in red. All LDCs met the 45-minute and 60-minute targets, for which the data can be found in Appendix B.

	30 Minute			
	2003	2004	2005	2006
Central Hudson	81.0%	78.6%	78.9%	83.0%
Corning	77.0%	83.5%	82.2%	82.4%
Con Edison	71.9%	75.9%	76.4%	78.5%
KED LI	67.9%	74.8%	75.3%	76.2%
KED NY	67.6%	68.0%	65.9%	69.7%
NFG	87.1%	87.4%	88.5%	91.1%
NGrid	76.8%	80.8%	79.4%	82.2%
NYSEG	80.4%	81.1%	81.5%	78.0%
O&R	68.0%	71.7%	72.5%	78.4%
RG&E	95.0%	95.1%	95.3%	92.8%
St. Lawrence	72.4%	78.6%	81.1%	80.6%

Figure #7 - *Response Times for 30-Minute Goal*

Eight of the 11 LDCs improved performance in the 30-minute measure, and there are 10 LDCs now reaching the 30-minute goal, compared to nine in 2005, with O&R being the latest to meet this goal. Even though it achieved its best performance over the past four years, KED NY continues to fall well short of the 30 minute goal.

After falling short of the 30-minute target in 2003, Con Edison exceeded the target in 2004, and continued thereafter to further improve its performance. KED LI did not meet the 30-minute target in 2003 and 2004, but did so in 2005 and further improved in 2006. O&R significantly improved its performance during 2006 and now meets the 30-minute goal.

As can be seen in **Figure #7** above, KED NY experienced deteriorated performance in 2005 but improved in 2006. It instituted its Dispatch Performance Measurement Tool in September of 2006. This tool is a best-practices methodology of identifying implicit characteristics among its best performing dispatchers. Once its better performers and best practices are identified, other dispatchers are coached in an effort to improve efficiency. This program was implemented in KED LI in early 2006 and aided in the company's improvement for 2006. In addition, KED NY has committed to the implementation of Global Positioning System Technology (GPS) which will further aid in its response performance by providing a more efficient use of resources. Staff has seen the implementation of GPS aid in improving the response performance of other LDCs. KED NY is recommended to fully employ this technology as soon as possible. As in the Performance Measures Report for 2005, Staff continues to recommend KED NY explore additional approaches and implement efforts to improve its response to leak and odor calls, including looking at practices of other LDCs that have been able to show improvements in recent years.

Over the past four years, leak and odor calls statewide have decreased. There were 227,532 calls in 2003, 216,777 calls in 2004, 205,277 in 2005, and 185,130

in 2006, or a nearly 18.6% decrease over the period. While it is difficult to pinpoint an exact reason for this occurrence, it may be due in part to the reductions in leak backlogs and the continued efforts by LDCs to remove and replace its aging and leak-prone pipe.

Figure #8 indicates when KED NY actually responded to 75% of gas and odor emergency calls.

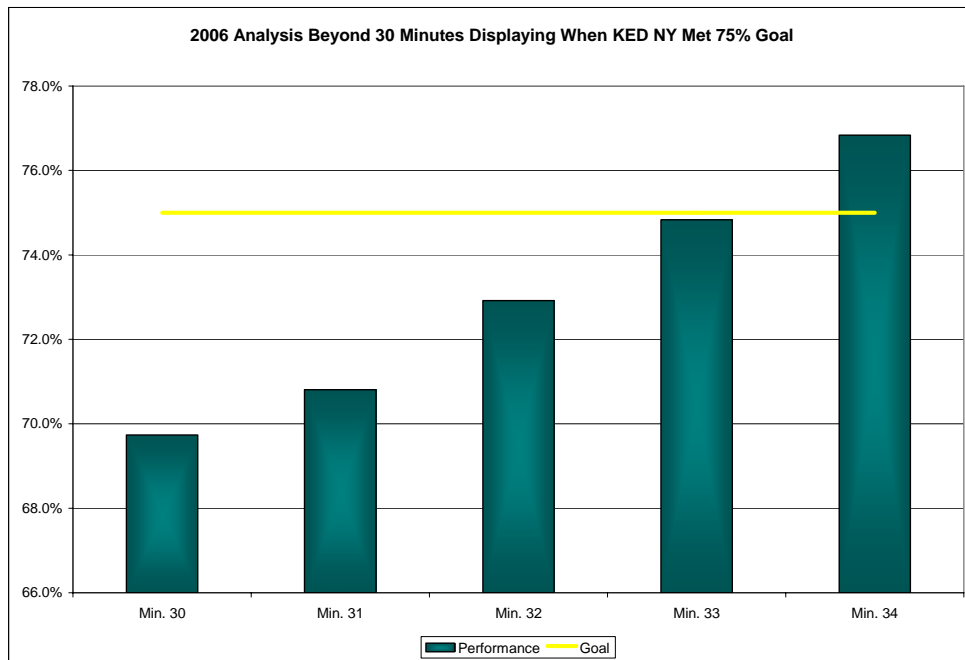


Figure #8 - *When KED NY Met 75% Goal Beyond 30 Minutes*

KED NY achieved the 75% during the 34th minute in 2006, as compared to during the 35th minute in 2005. While LDCs with similar operating areas have significantly improved performance in order to meet the 30-minute target, KED NY has displayed a relatively small improvement over the same time period. This level of performance has been pointed out to KED NY as needing attention in prior gas safety performance measure reports. KED NY's efforts to improve in this area apparently have not been as fruitful as similar LDCs, indicating that it should continue to

develop additional approaches. Staff recommends KED NY provide a detailed action plan of incremental efforts to improve performance being taken as well as a schedule for full implementation of GPS technology in its response to this report.

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 backlog⁹ of leaks at the end of the year. There are requirements in the natural gas safety regulations contained in 16 NYCRR Part 255 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.

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,

⁹ A backlog is defined as 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; Type 3 - monitored annually, no mandated repair interval.

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, 2006 (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 bare or poorly coated steel pipe that is difficult to protect against corrosion and cast iron. 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.

Staff is focused on evaluating overall system integrity and management of leaks in view of public safety.

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.

2006 Results and Analysis

Figure #9 displays the backlog of leaks requiring repair (Types 1, 2A, and 2) on December 31st of 2003, 2004, 2005, and 2006. The total year-end backlog of leaks requiring repair across the state increased slightly to 749 from 743 in 2005 (0.8%).

Since 2003, the statewide year-end backlog of leaks requiring repair has declined by 405, or nearly 35%. This is an indication 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.

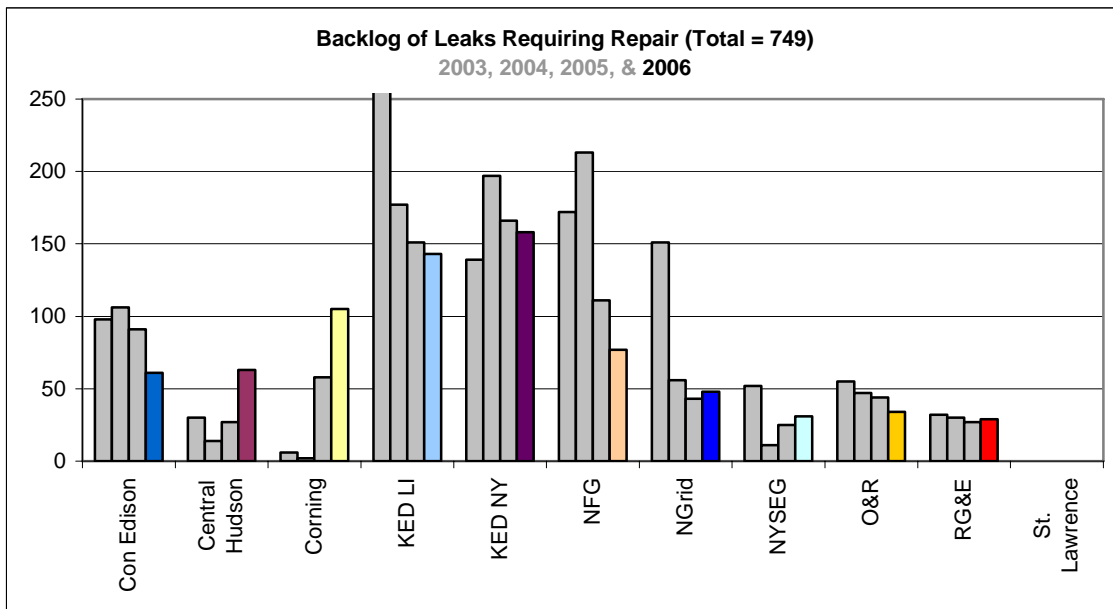


Figure #9 - Leak Backlog 2003 - 2006

As indicated in **Figure #9**, those with significant decreases in year-end backlogs are Con Edison with a reduction of 33% and NFG with approximately 31%. O&R also continues to reduce its backlog and lowered the number of unrepaired leaks by nearly 23% over 2005. NGrid completed 2005 with less than one-third of the backlog it had in 2003, and held relatively steady during 2006. NFG has reduced its backlog nearly 55% since 2003, even after experiencing an increase during 2004. The data indicate that most LDCs are focusing efforts on reducing their year-end backlogs.

For the second year in a row Corning experienced a significant increase of its leak backlog. In 2006, its leak backlog increased to 105 from 58 at the end of 2005. The company attributes the dramatic increase to aging bare steel pipe which is apparently showing an increased rate of leakage. During 2006, Corning committed to an aggressive leakage survey program, beyond minimum safety regulation requirements, in an attempt to find and repair as many hazardous leaks as possible. As a result of this effort, Corning discovered nearly 23% more potentially hazardous leaks than it did in 2005, which was approximately three times its historical number of annual leaks discovered from 2002 through 2004. Corning is also implementing a rigorous main and service replacement program to replace its aging infrastructure.

Central Hudson also experienced a significant increase in its backlog of leaks requiring repair; nearly 133% more than in 2005. The company indicated that it completed its leakage surveys later than normal in the year which did not allow it adequate time to reduce the unrepaired backlog to near historical level by year end.

Central Hudson discovered nearly 25% more leaks requiring repair in 2006, and repaired 17% more compared to 2005. The company subsequently reported that its backlog was down to 21 at the end of the first quarter of 2007. Staff recommends that Central Hudson evaluate its 2006 performance in this area to determine the probable reasons for this phenomenon, and work to reduce the backlog of these leaks when heading into the winter season.

NYSEG's year-end backlog has been trending upward since 2004, although it remains among the better performers in this area. The company's level of repair activity remained relatively constant in 2006 compared to 2005 as it discovered approximately 10% fewer potentially hazardous leaks and repaired about 11% fewer.

Both KED LI and KED NY continue to have the highest backlog of repairable leaks when heading into the winter season. Other LDCs with comparable distribution systems have managed to reduce leak backlogs to half the amount or less than these two LDCs over the same period. Staff recommends KED LI and KED NY address their leak backlog issues and work to minimize the number of outstanding repairable leaks when heading into the frost season.

Recommendations

For each of the measures listed below, it is recommended that the LDCs identified self-assess their performance, taking into consideration the analyses and recommendations in this report, and respond with action plans on how to improve performance in the future.

- Mismatch damages - Central Hudson, KED NY, NFG and NGrid
- Company & Company Contractor damages - Central Hudson and O&R
- Excavator Error damages - Corning, KED NY, NFG, NGrid, and O&R
- No-call damages - KED LI and O&R
- Emergency Response (75% within 30 minutes) - KED NY
- Leak Management - Central Hudson, KED LI, and KED NY

CONCLUSION

Natural gas is a safe and reliable energy product, if handled and transported properly. 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). 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.

Staff will continue to evaluate LDCs' performance in the measures contained in this report and will expect those LDCs, mentioned as having improvement opportunities, to provide the Safety Section of the Office of Gas and Water with specific details on how they plan to improve. Staff will continue to meet with LDCs on a regular basis and monitor LDC performance. Performance trends will be discussed with LDCs at those meetings and also analyzed in additional performance measure reports.

Appendix A

Reported Damage Data

2006 LDC Computed Performance	# One Call Tickets				Damages due to Mismarks per 1000 Tickets				No-Call Damages per 1000 Tickets			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Con Edison	77,576	87,340	94,083	99,375	0.68	0.61	0.74	0.57	0.80	1.23	1.17	0.86
Central Hudson	14,979	17,869	18,854	21,024	0.60	0.73	0.74	1.00	2.80	0.78	1.33	0.52
Corning	2,045	2,750	3,273	3,093	2.44	1.09	0.00	0.32	2.44	4.00	0.31	0.00
KED LI	70,718	83,137	80,402	94,156	0.99	1.06	1.22	0.85	3.03	3.56	3.36	3.13
KED NY	56,132	63,335	66,184	65,838	1.67	1.80	1.25	1.23	1.91	1.74	1.98	1.46
NFG	71,772	68,887	76,142	80,690	1.39	1.39	1.51	1.09	1.77	1.92	1.89	1.18
NGrid	73,613	77,667	87,517	91,286	1.90	1.21	1.81	1.71	1.75	1.48	1.59	1.02
NYSEG	51,252	48,590	60,046	66,178	0.70	0.84	0.58	0.26	1.05	0.80	0.57	0.41
O&R	17,274	17,512	18,995	22,559	1.22	1.08	1.21	0.58	3.01	2.34	2.32	1.73
RG&E	43,550	52,513	52,108	51,712	0.46	0.46	0.46	0.29	1.95	1.18	1.02	1.01
St. Lawrence	2,268	2,604	2,653	2,692	0.44	0.38	0.38	0.74	3.97	1.92	1.13	0.74

2006 LDC Reported Totals	Co. & Co. Contractor Damages per 1000 Tickets				Excavator Error Damages per 1000 Tickets				Total Damages per 1000 Tickets			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Con Edison	0.61	0.42	0.32	0.24	1.66	1.01	0.86	0.70	3.75	3.26	3.09	2.37
Central Hudson	0.13	0.11	0.05	0.24	4.14	3.19	2.02	1.43	7.68	4.81	4.14	3.19
Corning	0.00	0.00	0.00	0.00	2.44	4.36	4.89	4.85	7.33	9.45	5.19	5.17
KED LI	0.34	0.41	0.17	0.16	2.88	1.50	1.57	0.91	7.24	6.53	6.32	5.06
KED NY	0.21	0.14	0.12	0.06	4.85	4.31	4.46	3.14	8.64	7.99	7.81	5.89
NFG	0.10	0.19	0.24	0.14	2.90	3.25	2.78	2.58	6.16	6.75	6.42	4.98
NGrid	0.18	0.30	0.14	0.11	5.08	3.79	4.62	3.10	8.91	6.77	8.15	5.94
NYSEG	0.10	0.00	0.08	0.08	2.03	2.33	1.78	1.01	3.88	3.97	3.01	1.75
O&R	0.75	2.11	1.32	0.80	5.04	4.11	3.00	2.62	10.02	9.65	7.84	5.72
RG&E	0.16	0.15	0.25	0.14	2.78	1.87	1.71	1.28	5.35	3.66	3.44	2.71
St. Lawrence	0	0.38	0.00	0.00	4.41	2.69	1.51	1.49	8.82	5.38	3.02	2.97

2006 LDC Reported Totals	# One Call Tickets				Damages due to Mismarks				No-Call Damages			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Con Edison	77,576	87,340	94,083	99,375	53	53	70	57	62	107	110	85
Central Hudson	14,979	17,869	18,854	21,024	9	13	14	21	42	14	25	11
Corning	2,045	2,750	3,273	3,093	5	3	0	1	5	11	1	0
KED LI	70,718	83,137	80,402	94,156	70	88	98	80	214	296	270	295
KED NY	56,132	63,335	66,184	65,838	94	114	83	81	107	110	131	96
NFG	71,772	68,887	76,142	80,690	100	96	115	88	127	132	144	95
NGrid	73,613	77,667	87,517	91,286	140	94	158	156	129	115	139	93
NYSEG	51,252	48,590	60,046	66,178	36	41	35	17	54	39	34	27
O&R	17,274	17,512	18,995	22,559	21	19	23	13	52	41	44	39
RG&E	43,550	52,513	52,108	51,712	20	24	24	15	85	62	53	52
St. Lawrence	2,268	2,604	2,653	2,692	1	1	1	2	9	5	3	2

2006 LDC Reported Totals	Co. & Co. Contractor Damages				Excavator Error Damages				Total Damages			
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006
Con Edison	47	37	30	24	129	88	81	70	291	285	291	236
Central Hudson	2	2	1	5	62	57	38	30	115	86	78	67
Corning	0	0	0	0	5	12	16	15	15	26	17	16
KED LI	24	34	14	15	204	125	126	86	512	543	508	476
KED NY	12	9	8	4	272	273	295	207	485	506	517	388
NFG	7	13	18	11	208	224	212	208	442	465	489	402
NGrid	13	23	12	10	374	294	404	283	656	526	713	542
NYSEG	5	0	5	5	104	113	107	67	199	193	181	116
O&R	13	37	25	18	87	72	57	59	173	169	149	129
RG&E	7	8	13	7	121	98	89	66	233	192	179	140
St. Lawrence	0	1	0	0	10	7	4	4	20	14	8	8

Appendix B

Reported Emergency Response Data

	45 Minute				60 Minute			
	2003	2004	2005	2006	2003	2004	2005	2006
Central Hudson	99.2%	98.8%	98.8%	98.7%	99.9%	99.9%	99.9%	99.8%
Corning	93.0%	96.1%	93.9%	95.8%	98.0%	99.6%	96.8%	99.2%
Con Edison	96.3%	97.3%	97.1%	97.6%	99.9%	99.9%	99.9%	99.9%
KED LI	93.1%	96.0%	96.2%	96.1%	99.9%	99.9%	99.9%	99.9%
KED NY	92.2%	92.4%	90.6%	91.8%	98.1%	98.4%	97.9%	97.8%
NFG	96.1%	96.3%	96.8%	97.0%	98.9%	98.9%	99.0%	99.0%
NGrid	92.1%	94.1%	93.6%	95.1%	97.2%	98.0%	98.0%	98.6%
NYSEG	96.2%	96.0%	96.0%	94.5%	99.4%	99.4%	99.2%	98.8%
O&R	94.2%	95.8%	95.1%	96.7%	99.7%	99.7%	99.5%	99.9%
RG&E	99.3%	99.5%	99.4%	98.9%	99.9%	99.9%	99.8%	99.8%
St. Lawrence	89.0%	91.0%	95.3%	95.5%	98.2%	98.5%	99.2%	99.2%

# Calls	2003	2004	2005	2006
Central Hudson	4,587	4,724	4,999	4,075
Corning	716	722	1,487	1,036
Con Edison	31,749	33,527	30,478	28,356
KED LI	30,593	28,459	27,922	25,034
KED NY	64,431	59,046	53,200	49,034
NFG	32,915	30,207	29,543	25,743
NGrid	28,602	27,507	25,206	22,682
NYSEG	10,210	9,487	9,999	8,995
O&R	8,231	8,260	8,033	7,656
RG&E	14,882	14,248	13,917	12,123
St. Lawrence	616	590	493	396
Total:	227,532	216,777	205,277	185,130

Appendix C

Reported Leak Data

2006 Total Leak Repairs on Mains by Type								
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,266	72	0	126	17	2,750	1	0
Central Hudson	0	52	0	32	13	94	0	0
Corning	139	1	0	0	1	0	0	2
KED LI	1,279	268	33	87	86	208	0	0
KED NY	95	0	0	34	3	2,907	0	0
NFG	2,374	0	0	109	133	404	0	24
NGrid	106	53	0	0	13	465	0	0
NYSEG	146	0	0	106	21	0	0	10
O&R	283	0	0	19	22	28	0	0
RG&E	114	57	0	196	18	55	0	0
St. Lawrence	0	0	0	1	0	0	0	0

2006 Total Leak Repairs on Services by Type								
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,372	140	0	384	80	0	153	0
Central Hudson	0	119	0	71	27	38	0	0
Corning	96	3	0	0	0	0	0	1
KED LI	1,487	350	42	66	266	0	13	0
KED NY	335	0	0	125	157	0	272	0
NFG	686	0	0	96	131	0	0	28
NGrid	525	116	0	0	59	0	9	1
NYSEG	148	0	0	76	113	0	0	20
O&R	297	0	0	6	40	0	0	0
RG&E	94	73	0	134	45	0	16	0
St. Lawrence	0	0	0	3	0	0	0	0

Backlog of Leaks Requiring Repair

LDC	Leak Backlog - Type 1, 2, and 2a			
	2003	2004	2005	2006
Con Edison	98	106	91	61
Central Hudson	30	14	27	63
Corning	6	2	58	105
KED LI	419	177	151	143
KED NY	139	197	166	158
NFG	172	213	111	77
NGrid	151	56	43	48
NYSEG	52	11	25	31
O&R	55	47	44	34
RG&E	32	30	27	29
St. Lawrence	0	0	0	0
Total:	1,154	853	743	749

Repaired Leaks Requiring Repair

LDC	Leaks Repaired - Type 1, 2, and 2a			
	2003	2004	2005	2006
Con Edison	7,769	7,498	6,445	6,312
Central Hudson	184	199	252	295
Corning	58	109	138	219
KED LI	6,327	4,127	3,730	3,359
KED NY	5,359	4,174	3,553	3,120
NFG	2,741	2,157	2,032	2,042
NGrid	1,407	1,446	1,212	1,067
NYSEG	665	713	432	385
O&R	456	716	528	499
RG&E	1,022	1,210	677	451
St. Lawrence	5	3	4	1