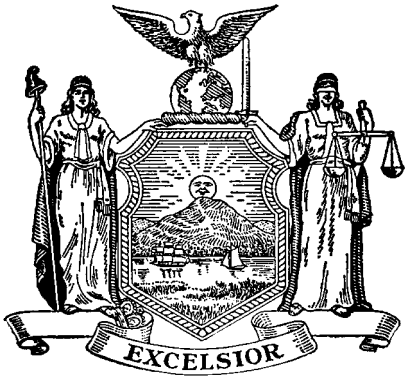
STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE



2007 GAS SAFETY PERFORMANCE MEASURES REPORT

(CASE 08-G-0413)

Safety Section
Office of Electric, Gas & Water
June 2, 2008

EXECUTIVE SUMMARY

This report examines the New York State natural gas local distribution companies' (LDCs) 2003 through 2007 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. Overall, the data indicate that LDC performance has substantially improved across the state over the five year period.

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 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 approximately 10.6% during 2007. The number of requests to locate underground gas facilities (tickets) received by the utilities increased by 6.3%, which is most likely attributable to a combination of improved compliance by excavators, the 811 dialing initiative, and an increase in construction activity, particularly in New York City. Three of the four damage categories realized double-digit improvements from 2006, while the Excavator Error measure remained virtually unchanged. 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 damage rates 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) was identified as an outlier in the 2006 report, and significantly improved during 2007. The company's implementation of tighter controls over its locating contractor appears to be positively impacting its performance. However, NGrid, and Orange & Rockland Utilities, Inc. (O&R) which experienced significant deterioration in 2007, remain outliers in this measure with the lowest levels of performance among the LDCs. These LDCs need to continue focusing attention and making efforts to improve their locating performance.

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-call 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.

Central Hudson Gas & Electric Corporation (Central Hudson), Corning Natural Gas Corporation (Corning), and KeySpan Energy Delivery of New York (KED NY) all realized notable improvements in performance in the Excavator Error measure. However, many LDCs experienced considerable deterioration in performance in this area during 2007, including Consolidated Edison Company of New

York, Inc. (Con Edison), New York State Electric & Gas Corporation (NYSEG), O&R, Rochester Gas & Electric Corporation (RG&E) and St. Lawrence Gas Company, Inc. (St. Lawrence). NGrid also deteriorated slightly, and it, along with Corning and O&R, continue to have considerable room for improvement.

KeySpan Energy Delivery of Long Island (KED LI) was identified as an outlier in the 2006 report in the No-call damages measure. It managed to improve significantly compared to its 2006 performance level. Other LDCs with notable improvements in the No-call damage measure during 2007 are Con Edison, KED NY, NGrid, and RG&E. Those that experienced notable increases in the rate of damages due to No-calls are Central Hudson, O&R, and St. Lawrence.

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 and safety programs, aggressive 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. Also, the voluntary reporting of No-call damages to Staff for possible enforcement actions is anticipated to increase awareness and excavator participation in the One-call process.

Damages due to company and company contractors also showed an improvement statewide during 2007. Although O&R improved in this area during 2005 and 2006, it regressed in 2007, and continues to experience a significantly higher rate of these types of damages than

any other LDC. Central Hudson and NYSEG fell to their poorest rate of these damages in the past five years, with NYSEG doubling its previous highest rate of these damages. Similar to mismark 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, while Central Hudson and NYSEG need to address their deteriorating performance and make efforts to improve in this area.

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 2007. 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, public awareness initiatives, 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 60-minute response goal, while Corning was the only LDC to miss the 45-minute response goal. All LDCs except Corning and KED NY met the 30-minute goal. Corning attributes not meeting these goals, which occurred for the first time in 2007, to major road construction projects that increased travel time. KED NY, while still failing to reach the 30-minute response

goal, made a significant improvement over its 2006 performance. It has committed to implement GPS technology to aid its dispatching capability process as well as adding personnel in order to improve performance.

After failing to meet the 30-minute goal in 2003 through 2005, O&R's performance continued to improve in 2007. O&R and Con Edison, both of which failed to reach the 30-minute target in 2003, surpassed 80% in 30-minutes in 2008. Central Hudson and National Fuel Gas Distribution Corporation (NFG) also reached their best performance levels in the 30-minute response measure, with 84.1% and 91.4%, respectively.

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. Since year-end 2003, the backlog has decreased 54% statewide. Central Hudson is the only LDC to have a higher backlog in 2007 than in 2003. LDCs with notable percent decreases in leak backlog over the period are Con Edison, KED LI, NGrid, NYSEG, and O&R.

The net result statewide for year-end 2007 is a 29.5% decrease in the number of leaks requiring repair compared to year-end 2006. The only LDC to experience an increase in leak backlog at year-end 2007 was NFG. Its backlog went from 77 at the end of 2006 to 140 one year later. NFG and Central Hudson must work to effectively

manage their leak backlogs all year in order minimize the number of active potentially hazardous leaks when heading into the frost season.

Corning managed a significant improvement over its 2006 year-end backlog. It completed 2006 with 105 repairable leaks, and lowered its backlog to five at the end of 2007. It is aggressively replacing leak-prone pipe, and also hired qualified contractors in the fall to help repair active leaks on its system ahead of winter.

KED LI and KED NY continue to have relatively high potentially hazardous leak backlogs when heading into the winter season. However, these two LDCs made notable improvements in 2007.

LDCs across the state are collectively working to update the gas distribution infrastructure. In 2008 LDCs expect to replace over 300 miles of leak-prone pipe in New York. The pipe is being identified through the use of risk-based methodologies and targeted for replacement based on these analyses. These efforts will improve public safety, and over time, will help reduce the leakage rates LDCs experience.

The analysis of each performance measure in this report identifies specific areas where certain LDCs have room for improvement. It is recommended 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. 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 2007

Throughout this report, all of the figures display performance results for 2003-2007 for each LDC with the grey columns in the bar graphs representing 2003-2006, and the color columns representing 2007 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 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[1]
- damages resulting from excavator error
- damages resulting from company and company contractor error
- 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. 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 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.

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

[1] A mismark is a failure by the LDC to accurately mark the location of underground facilities.

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.

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. To reduce No-call damages, 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.

It is important to note that the damage prevention measures evaluate actual damages to LDCs' underground facilities. Based on the data reported in 2007, more than 99.6% of one-call tickets had no associated damages to natural gas facilities. There were a total of 2,394 damages to natural gas LDC facilities in 2007, 5.0% less than in 2006. When these damages are normalized with an increase of 37,735 one-call tickets (6.3%) during 2007, 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. 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.

During 2007, legislation by the Federal Communications Commission (FCC) mandated the creation of a single nation-wide one-call process for excavators be implemented using the three-digit telephone number 811. The single telephone number relieves excavators from having to remember multiple phone numbers if they work in areas covered by different one-call centers. It also facilitates national one-call education efforts and carries a message that is applicable no matter where excavators work in the country. Both One-Call Centers in New York State are participating.[2]

811®

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

Figure #1 below displays the collective statewide performance regarding the damage prevention measures. Note the significant increase in the number of tickets over the

[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.

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

Metric	2003	2004	2005	2006	2007
# Tickets	481,179	522,204	560,257	598,603	636,338
Damages/1000 tickets Due to:					
Mismarks	1.14	1.05	1.11	0.89	0.73
Co. & Co. Contractor Error	0.27	0.31	0.22	0.17	0.14
Excavator Error	3.28	2.61	2.55	1.83	1.84
No-Calls	1.84	1.78	1.70	1.33	1.05
Total (per 1000)	6.53	5.75	5.59	4.21	3.76

Figure #1 - *Damages per 1000 Tickets Statewide*

All four metrics composing the Total Damage measure continue to show promising results. The greatest improvement in 2007 came in the damages due to No-calls measure (20.7%) closely followed by the damages due to Mismarks measure (18.0%). There was also continued improvement in the damages due to Company and Company Contractor Error measure. The damages due to Excavator Error measure remained essentially unchanged from 2006. It is encouraging to see that LDCs have collectively maintained, and continue to improve, performance over the past several years. 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.

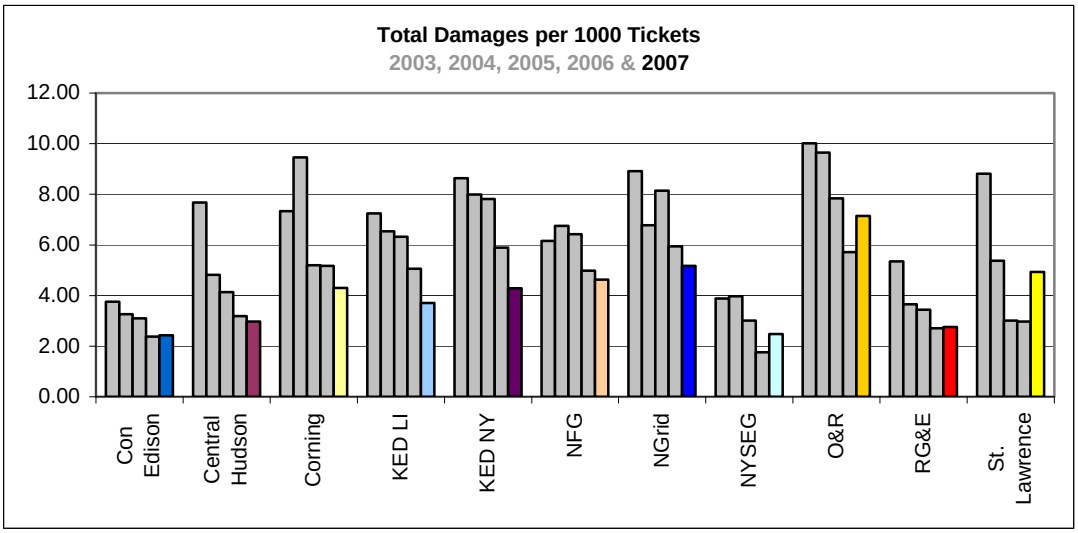

Figure #2 – *Total Damages per 1000 Tickets Statewide*

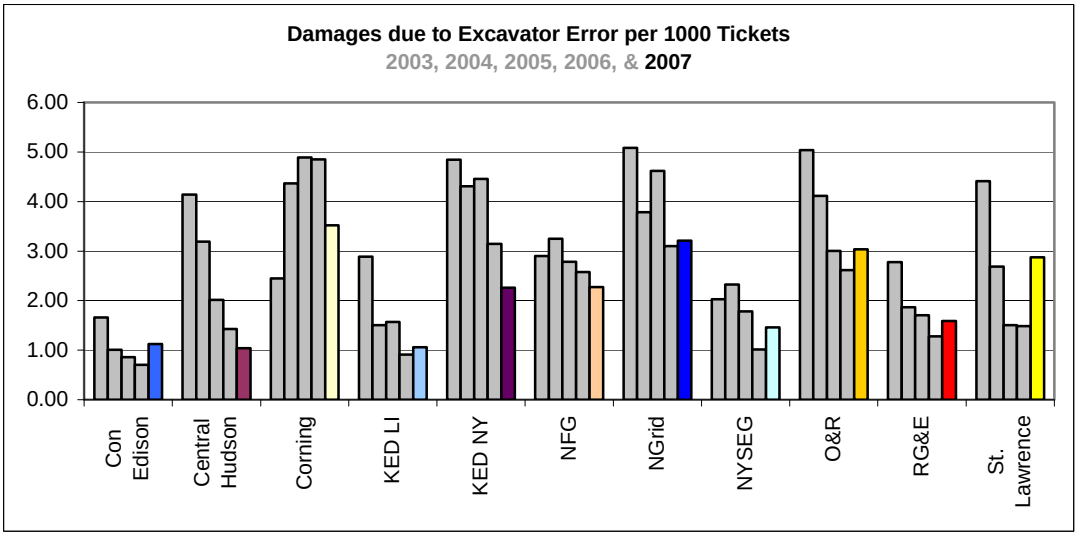

Figure #3 – *Excavator Error Damages per 1000 Tickets Statewide*

The continued improvement statewide for No-call damages is a positive sign, particularly when coupled with the increase in One-Call tickets. 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 for enforcement actions for violations of 16 NYCRR Part 753 (Code Rule 753).[3] In order to aid in the enforcement of Code Rule 753, *Protection of Underground Facilities*, Staff requested LDCs to forward information about contractors who damaged underground facilities without having markout requests. 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 2007, KED LI, KED NY, and RG&E all made significant improvements, while Central Hudson, O&R, and St. Lawrence experienced notable deterioration in performance. LDC performance in No-call damages is displayed in **Figure #4** below:

[3] 16 NYCRR Part 753-3.1 requires all excavators to notify the One-call system at least two but not more than ten working days prior to any non-emergency excavation or demolition work takes place.

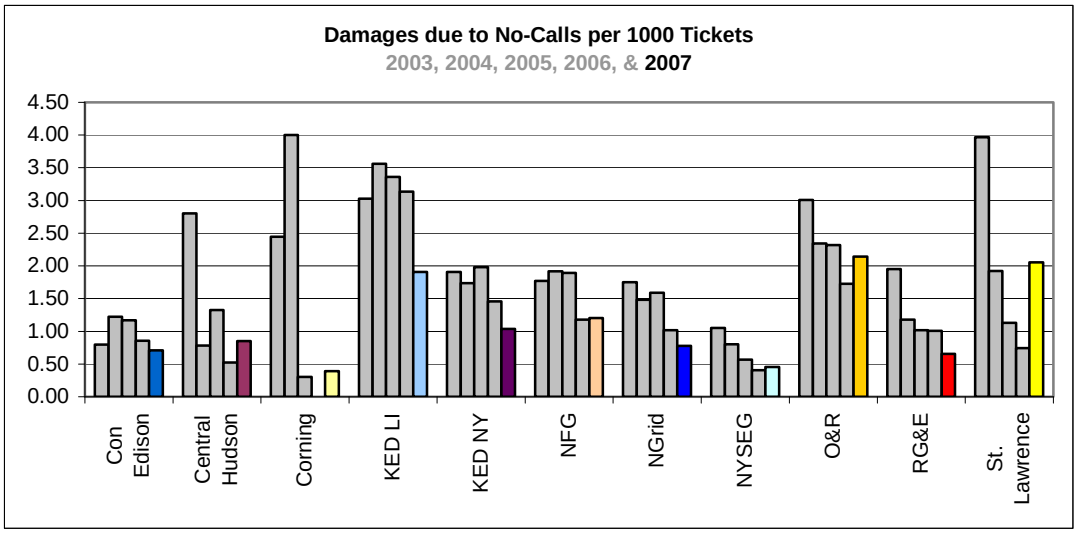

Figure #4 – *No-call Damages per 1000 Tickets Statewide*

Damages due to Mismarks also improved during 2007, further contributing the overall improvement in the statewide total damages measure. 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 direct contractors. Con Edison, Central Hudson, KED LI, KED NY, NGrid, and St. Lawrence all improved at least 19% over their 2006 performance levels in damages due to mismarks. Corning, NYSEG, O&R, and RG&E experienced deteriorations of at least 21% in 2007, with O&R experiencing 78% more damages due to mismarks. LDC performance in Mismark damages is displayed in **Figure #5** below:

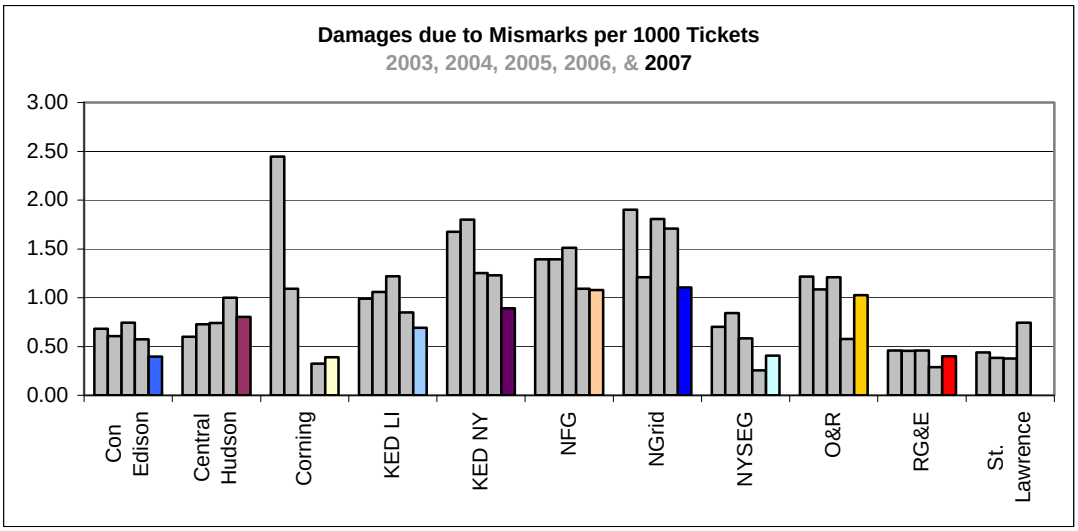

Figure #5 – *Mismark Damages per 1000 Tickets Statewide*

Company & Company Contractor[4] damages continued to improve during 2007 after a deterioration in 2004. These damages occurred in 2007 at half of the rate in which they occurred in 2003. KED NY and O&R experienced a greater number of damages due to Company and Company Contractors in 2007 while Central Hudson and NYSEG experienced their highest levels of these damages in the past five years. 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. LDC performance in Company and Company Contractor damages is displayed in **Figure #6** below:

[4] 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.

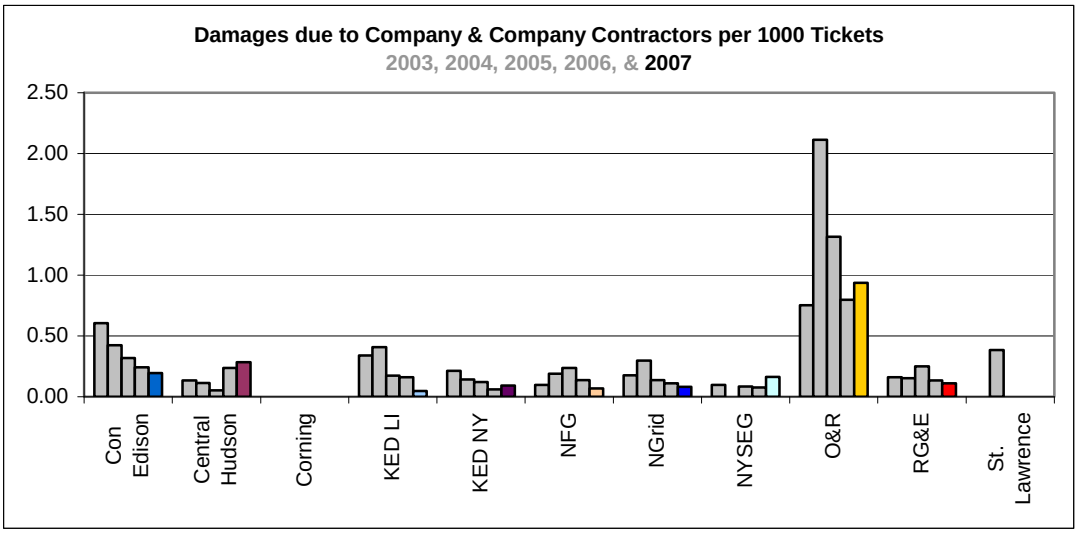

Figure #6 – *Company & Company Contractor Damages per 1000 Tickets Statewide*

2007 LDC Damage Results and Analysis

This section provides a review of the damage measures on a company-by-company basis over the past five years.

Con Edison	2003	2004	2005	2006	2007
Tickets	77576	87340	94083	99375	118380
Damages/1000 tickets Due to:					
Mismarks	0.68	0.61	0.74	0.57	0.40
No-Calls	0.80	1.23	1.17	0.86	0.71
Co. & Co. Contractor	0.61	0.42	0.32	0.24	0.19
Excavator Error	1.66	1.01	0.86	0.70	1.12
Total	3.75	3.26	3.09	2.37	2.42

Figure #7 – *Con Edison Damage Performance*

Con Edison experienced a 19% increase in the number of one-call tickets over 2006, which the company attributed to a substantial increase in city construction projects. Con Edison's total damage performance deteriorated slightly in 2007 from 2006. It managed to reach it best levels ever in Mismarks, No-calls, and

Company & Company Contractor damage performance. However, its improvements in these metrics were offset by a substantial increase in damages due to excavator error. Con Edison reported that its improvement in Mismark damages and Company & Company Contractor damages was led by the new requirement for its contractors to hand dig within three feet of marked locations of Con Edison's pipelines.

Central Hudson	2003	2004	2005	2006	2007
Tickets	14979	17869	18854	21024	21171
Damages/1000 tickets Due to:					
Mismarks	0.60	0.73	0.74	1.00	0.80
No-Calls	2.80	0.78	1.33	0.52	0.85
Co. & Co. Contractor	0.13	0.11	0.05	0.24	0.28
Excavator Error	4.14	3.19	2.02	1.43	1.04
Total	7.68	4.81	4.14	3.19	2.98

Figure #8 – *Central Hudson Damage Performance*

Central Hudson's performance in damages due to excavator error improved significantly in 2007, and is now only 24% of the level it experienced in 2003. After three years of deterioration in Mismarks it made a notable improvement in 2007. However, its 2007 Mismark damage performance remains worse than the levels it obtained in 2003 through 2005. Central Hudson also continues to experience inconsistent performance in No-call damages and continues to experience problems when excavating around its own facilities. It experienced its worse performance in Company & Company Contractor damages in five years as it had two of these damages in 2003 and 2004, one in 2005, five in 2006, and now six in 2007. Even though Central Hudson deteriorated in the metrics above, it continued to improve its Total damage performance in 2007.

Corning	2003	2004	2005	2006	2007
Tickets	2045	2750	3273	3093	2558
Damages/1000 tickets Due to:					
Mismarks	2.44	1.09	0.00	0.32	0.39
No-Calls	2.44	4.00	0.31	0.00	0.39
Co. & Co. Contractor	0.00	0.00	0.00	0.00	0.00
Excavator Error	2.44	4.36	4.89	4.85	3.52
Total	7.33	9.45	5.19	5.17	4.30

Figure #9 – *Corning Damage Performance*

Corning again experienced a single mismark damage in 2007, but its normalized performance slipped due to the decrease in one-call tickets.[5] It also experienced a No-call damage during 2007. As identified in the 2006[6] report, its rate of damages due to excavator error remains high and the company must actively reach out to excavators to educate them in safe excavating practices. Corning continued to improve is total damage performance during 2007.

KED LI	2003	2004	2005	2006	2007
Tickets	70718	83137	80402	94156	105488
Damages/1000 tickets Due to:					
Mismarks	0.99	1.06	1.22	0.85	0.69
No-Calls	3.03	3.56	3.36	3.13	1.91
Co. & Co. Contractor	0.34	0.41	0.17	0.16	0.05
Excavator Error	2.88	1.50	1.57	0.91	1.06
Total	7.24	6.53	6.32	5.06	3.71

Figure #10 – *KED LI Damage Performance*

KED LI experienced notable improvements in every metric except Excavator Error damages. It was identified

[5] 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.

[6] Case 07-G-0461 In the Matter of Staff's Analysis of Local Distribution Company Safety Performance and Performance Measures

as a significant outlier in the 2006 report for No-call damages and managed to make a significant improvement during 2007. This is a noteworthy improvement and it must continue its outreach efforts to educate excavators of their obligation to utilize the One-Call system. The company reports that improving locator protocols, stricter contract guidelines for contractor locators, reporting No-call damages to Staff for possible enforcement actions, and increasing company inspector presence on higher risk excavations have helped improve its Total damage performance.

KED NY	2003	2004	2005	2006	2007
Tickets	56132	63335	66184	65838	75164
Damages/1000 tickets Due to:					
Mismarks	1.67	1.80	1.25	1.23	0.89
No-Calls	1.91	1.74	1.98	1.46	1.04
Co. & Co. Contractor	0.21	0.14	0.12	0.06	0.09
Excavator Error	4.85	4.31	4.46	3.14	2.26
Total	8.64	7.99	7.81	5.89	4.28

Figure #11 – *KED NY Damage Performance*

KED NY continued to improve its total damage performance in 2007. It also substantially improved in every metric except for Company & Company Contractor damages. KED NY was identified in the 2006 report as an outlier in damages due to mismarks and excavator error, and it clearly made the effort to improve in these areas during 2007. KED NY has adopted the same efforts listed above for KED LI in its efforts to improve performance.

NFG	2003	2004	2005	2006	2007
Tickets	71772	68887	76142	80690	86281
Damages/1000 tickets Due to:					
Mismarks	1.39	1.39	1.51	1.09	1.08
No-Calls	1.77	1.92	1.89	1.18	1.21
Co. & Co. Contractor	0.10	0.19	0.24	0.14	0.07
Excavator Error	2.90	3.25	2.78	2.58	2.27
Total	6.16	6.75	6.42	4.98	4.62

Figure #12 – *NFG Damage Performance*

NFG continued to improve slightly in every metric except for a slight deterioration in No-call damages. Even though it managed to improve over 2006, its performance is relatively weak in every metric except Company & Company Contractor damages. NFG was identified as an outlier in damages due to Mismarks in the 2006 report and its performance remained virtually unchanged. It must continue to work on improving damages due to mismarks, and increase its efforts in excavator outreach to reduce the damages that occur to its pipelines.

NGrid	2003	2004	2005	2006	2007
Tickets	73613	77667	87517	91286	85985
Damages/1000 tickets Due to:					
Mismarks	1.90	1.21	1.81	1.71	1.10
No-Calls	1.75	1.48	1.59	1.02	0.78
Co. & Co. Contractor	0.18	0.30	0.14	0.11	0.08
Excavator Error	5.08	3.79	4.62	3.10	3.21
Total	8.91	6.77	8.15	5.94	5.18

Figure #13 – *NGrid Damage Performance*

NGrid was identified as a significant outlier in damages due to mismarks in the 2006 report and responded with substantial improvement in 2007. It made a notable improvement in No-call damage performance and experienced approximately half the rate of this type of damage in 2007 as it did in 2005. NGrid made a substantial improvement in Excavator Error damages in 2006. However, after being identified in the 2006 report as an outlier that should continue working to improve performance in Excavator Error damages, it actually experienced a slight deterioration in 2007. After a considerable deterioration in 2005, NGrid's combined efforts in all damage metrics continued to improve its Total damage performance. Staff expects to see continued improvement in damages due to mismarks and excavator error as the company reports having developed better controls over its contract-locating employees and it increases efforts to educate the excavating community.

NYSEG	2003	2004	2005	2006	2007
Tickets	51252	48590	60046	66178	61629
Damages/1000 tickets Due to:					
Mismarks	0.70	0.84	0.58	0.26	0.41
No-Calls	1.05	0.80	0.57	0.41	0.45
Co. & Co. Contractor	0.10	0.00	0.08	0.08	0.16
Excavator Error	2.03	2.33	1.78	1.01	1.46
Total	3.88	3.97	3.01	1.75	2.48

Figure #14 – *NYSEG Damage Performance*

NYSEG experienced a reduction of nearly 7% in one-call tickets and a significant deterioration in its Total damage performance in 2007. It experienced a higher damage rate in every metric including its worst performance in five years in damages by company and company contractor personnel. NYSEG attributes most of its deterioration in damage performance to a significant increase in construction activity in the greater Binghamton area following the severe floods that occurred in 2006. Despite the indication that the across the board deterioration is due to a localized problem in the Binghamton area, NYSEG must perform a self-assessment of its damage prevention program and identify and implement corrective actions.

O&R	2003	2004	2005	2006	2007
Tickets	17274	17512	18995	22559	22395
Damages/1000 tickets Due to:					
Mismarks	1.22	1.08	1.21	0.58	1.03
No-Calls	3.01	2.34	2.32	1.73	2.14
Co. & Co. Contractor	0.75	2.11	1.32	0.80	0.94
Excavator Error	5.04	4.11	3.00	2.62	3.04
Total	10.02	9.65	7.84	5.72	7.14

Figure #15 – *O&R Damage Performance*

After continuously improving for three years O&R experienced significant deterioration in its Total damage

performance. The greatest drop in performance was a 78% higher rate of damages due to mismarks. It also continues to experience a large number of damages due to excavation by company and company contractor personnel. These two areas are particularly important as the company has the most direct control of its performance. The company reported that it had turnover of five out of 11 of its locators early in 2007 and the lack of experience contributed to the increase in mismarks. O&R further indicated that it performed approximately 30% more excavations around its own facilities in 2007 than in 2006, which resulted in an increase in the actual number of damages that occurred. It also experienced an approximately 45% increase in municipal projects and stated these contributed significantly to its damages. It further experienced a 50% increase in damages by contractors working for Verizon, which doubled the installation rate of fiber optic cable in O&R's service territory in 2007. O&R must fully evaluate why its performance slid in each metric during 2007, increase its outreach efforts to contractors performing large construction projects around its facilities, and develop tighter controls over its own locators and contractors.

RG&E	2003	2004	2005	2006	2007
Tickets	43550	52513	52108	51712	54854
Damages/1000 tickets Due to:					
Mismarks	0.46	0.46	0.46	0.29	0.40
No-Calls	1.95	1.18	1.02	1.01	0.66
Co. & Co. Contractor	0.16	0.15	0.25	0.14	0.11
Excavator Error	2.78	1.87	1.71	1.28	1.59
Total	5.35	3.66	3.44	2.71	2.75

Figure #16 – *RG&E Damage Performance*

After three years of continuous improvement RG&E's total damage performance slightly deteriorated in 2007, driven by higher rates in damages due to mismarks and excavator error. However, deterioration in these metrics were nearly offset by a significant improvement in damages due to no-calls. RG&E attributes its increased level of Mismark damages to the approximately 25% more locates it allowed its contract locators to perform. RG&E should consider developing controls similar to those that NGrid instituted for its locating contractors that helped it improve Mismark damage performance. RG&E credits its improvement in No-call damages to the implementation of the 811 call number and its outreach efforts to contractors and homeowners. It further reported it held a Dig Safely seminar in Rochester prior to the beginning of 2008 in an effort to reduce the number of Excavator Error damages in the future.

St. Lawrence	2003	2004	2005	2006	2007
Tickets	2268	2604	2653	2692	2433
Damages/1000 tickets Due to:					
Mismarks	0.44	0.38	0.38	0.74	0.00
No-Calls	3.97	1.92	1.13	0.74	2.06
Co. & Co. Contractor	0.00	0.38	0.00	0.00	0.00
Excavator Error	4.41	2.69	1.51	1.49	2.88
Total	8.82	5.38	3.02	2.97	4.93

Figure #17 – *St. Lawrence Damage Performance*

After remaining relatively flat for two years St. Lawrence experienced a significant deterioration in total damage performance in 2007. Its total damages rose from eight in 2005 and 2006 to 12 in 2007, coupled with a decrease in one-call tickets. All of the damages it experienced were caused by no-calls and excavator error. It experienced no damages from the areas within its direct

control. St. Lawrence must improve its efforts to educate the excavation community on their obligations and the need to work safely around buried gas facilities.

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 qualified[8] company personnel at the location.

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[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.

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 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.

2007 Results and Analysis

Figure #18 displays the collective annual statewide Emergency Response Time (ERT) performance for each goal since 2003, with 2007 performance presented in color. The statewide performance has improved for each goal over the past five years with a 4% increase in the 30-minute goal, from 76.8% to 80.8%, leading the performance gains.

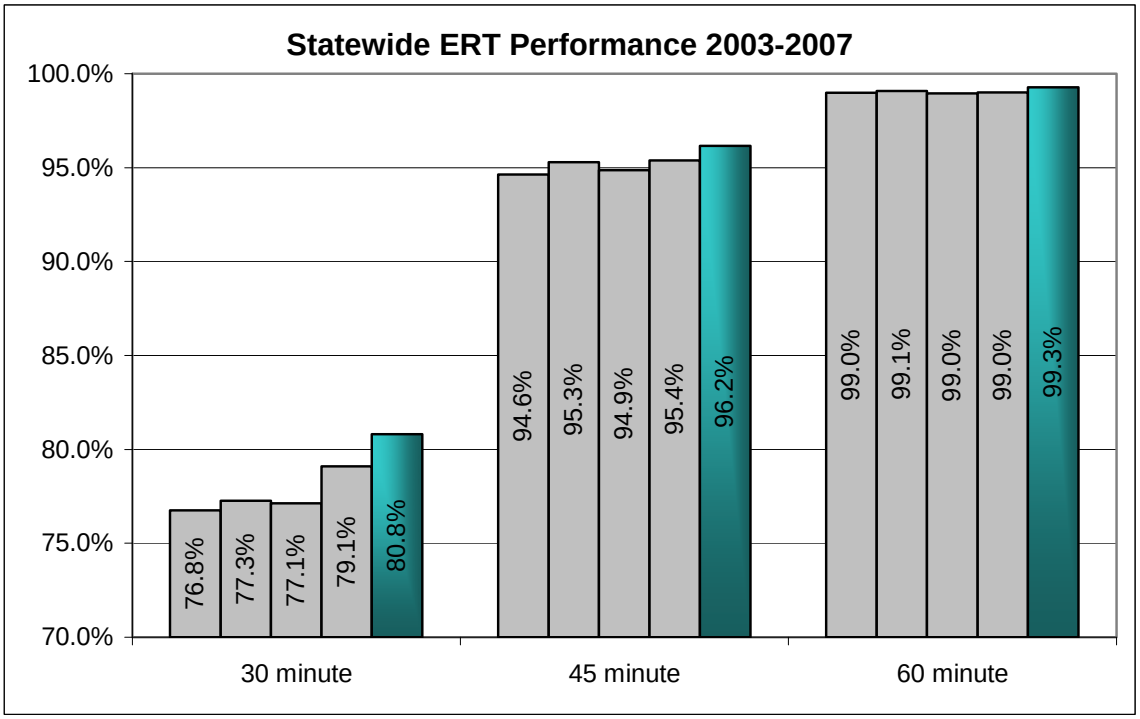

Figure #18 – *Statewide ERT Performance for All Goals*

Figure #19 presents data for calendar years 2003 through 2007 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
Central Hudson	81.0%	78.6%	78.9%	83.0%	84.1%
Corning	77.0%	83.5%	82.2%	82.4%	74.7%
Con Edison	71.9%	75.9%	76.4%	78.5%	80.3%
KED LI	67.9%	74.8%	75.3%	76.2%	75.8%
KED NY	67.6%	68.0%	65.9%	69.7%	74.3%
NFG	87.1%	87.4%	88.5%	91.1%	91.4%
NGrid	76.8%	80.8%	79.4%	82.2%	82.0%
NYSEG	80.4%	81.1%	81.5%	78.0%	78.9%
O&R	68.0%	71.7%	72.5%	78.4%	80.3%
RG&E	95.0%	95.1%	95.3%	92.8%	92.4%
St. Lawrence	72.4%	78.6%	81.1%	80.6%	78.9%

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

Six of the 11 LDCs improved over their 2006 performance level in the 30-minute measure, and there are nine LDCs that reached the 30-minute goal, compared to 10 in 2006. This is the first time over the five year period that Corning did not meet the 30-minute goal. Even though KED NY made a significant improvement during 2007, and achieved its best performance over the past five years, it continues to fall short of the 30 minute goal. KED NY indicates it expects to reach the 30-minute goal during 2008.[9] KED NY has also committed to implementing Global Positioning System (GPS) technology by the end of 2009 which will compliment its automated dispatching computer system, and should help to further improve its response performance.

Central Hudson, Con Edison, NFG, and O&R all reached their highest performance level in the 30-minute target over the five years. Con Edison (2003) and O&R (2003-2005) failed to reach the targets early on and now each achieved a performance level of over 80% in 30 minutes in 2007. After falling short of the target in 2003 and 2004, KED LI continued to reach the 30-minute target, even though its performance declined slightly.

The only LDC that did not meet the 45-minute goal was Corning. It averaged responding to 89.2% of all leak and odor calls within 45 minutes, missing the goal by 0.8%. Corning met the 90% target in the 46th minute. All LDCs met the 60-minute target. The data for the 45-minute and 60-minute targets are located in Appendix B.

Corning received approximately 38% more calls during 2007 compared to 2006. However, the 2007 volume was

[9] KED NY reported a response performance of 77% during the first quarter of 2008.

near the level it received in 2005 when it reached an 82% performance level. The company indicated that major roadwork on some of the most commonly used roads in the service territory forced the company to use smaller, more rural roads when responding to leak and odor calls. The company contends that having to travel further distances and the increased traffic due to the construction work impacted the company's average response time. Corning's performance for the first two quarters of 2007 was 76% and 82%, respectively, but slipped to 68% for the third quarter and 73% during the fourth quarter. The quarterly performance indicates that the construction work had its greatest impact in the second half of the year.[10]

Over the first four years of the collected data, leak and odor calls statewide decreased from 227,532 calls in 2003, to 185,130 in 2006, or a nearly 18.6% decrease over the period. However, during 2007, the total number of calls statewide actually increased slightly to 188,402. While it is difficult to pinpoint an exact reason for this occurrence, it may be due in part to the increased public awareness efforts by the LDCs about the properties of natural gas. However, the increase could also be an anomaly. This is an issue that Staff will continue to monitor.

Figure #20 shows when Corning and KED NY actually responded to 75% of gas and odor emergency calls.

[10] Corning reported a performance level of 77% for the first quarter of 2008.

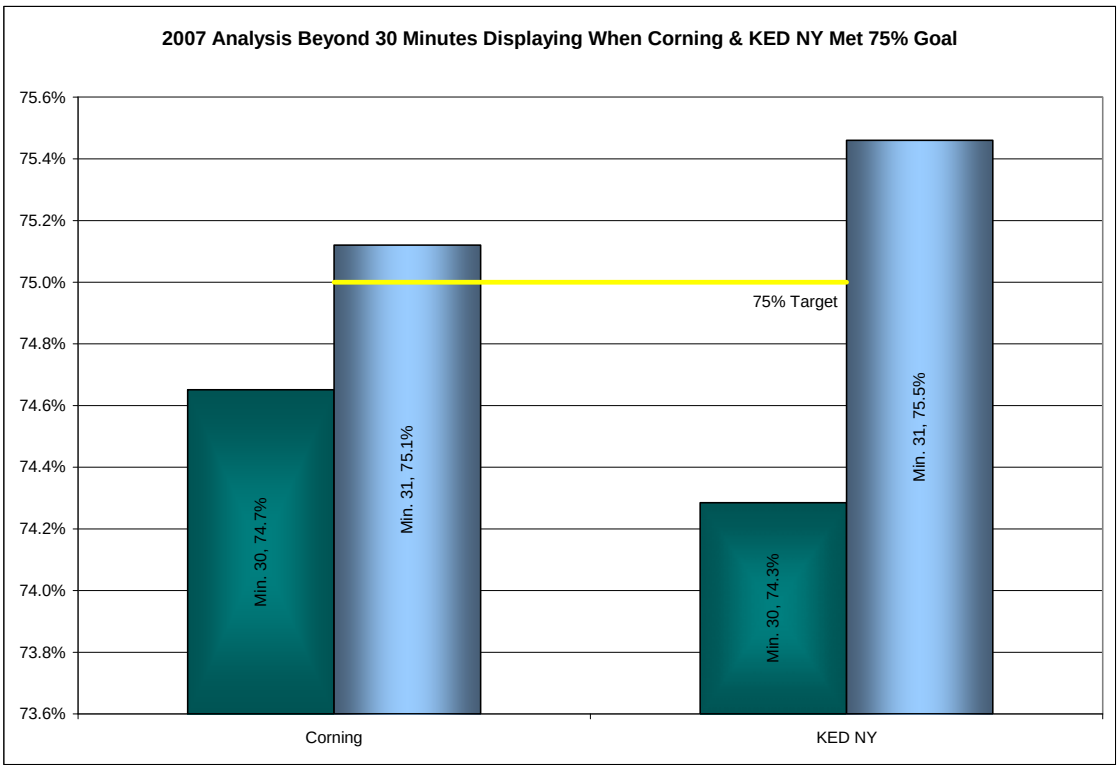

Figure #20 – *When Corning & KED NY Met 75% Goal Beyond 30 Minutes*

KED NY achieved 75% during the 31st minute in 2007, as compared to during the 34th minute in 2006. The company reports that increasing the personnel available to respond to leak and odor calls helped reduce the average time it took to respond. Corning also achieved 75% during the 31st minute. It expects to continue improved performance during 2008 now that the major construction projects have subsided.

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[11] 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, 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

[11] 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.

data analyses are presented as of December 31, 2007 (data as reported by the LDCs used in analyses are contained in Appendix D). 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.

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. During

2008 the LDCs across the state plan to collectively remove over 300 miles of leak-prone main.

2007 Results and Analysis

Since 2003, the statewide year-end backlog of leaks requiring repair has declined by 626, or 54%. This demonstrates 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 (89%), NYSEG (83%), KED LI (74%) and Con Edison (57%).

Figure #21 displays the backlog of leaks requiring repair (Types 1, 2A, and 2) on December 31st of 2003, 2004, 2005, 2006, and 2007. The total year-end backlog of leaks requiring repair across the state decreased from 749 in 2006 to 528 in 2007 (-29.5%). Numerical leak data is contained in Appendix C.

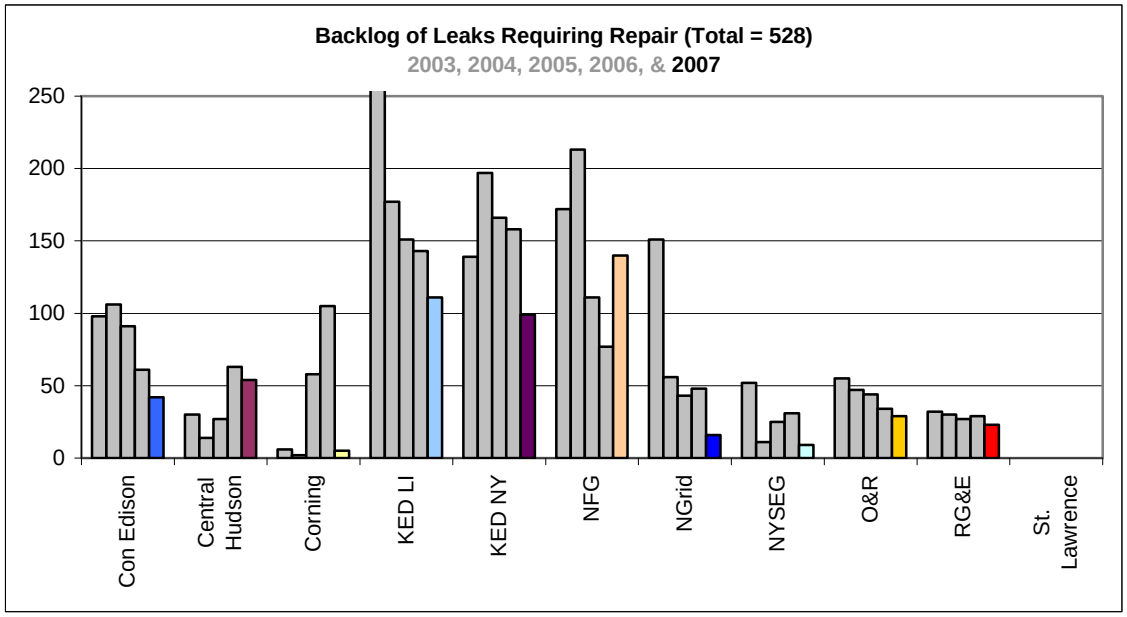

Figure #21 – *Leak Backlog 2003 - 2007*

All LDCs with the exception of Central Hudson have improved since 2003. Central Hudson continues to experience greater leakage rates on its distribution system and has not been able to effectively manage its leak backlog as it did in 2003 and 2004 (see **Figure #21** above). St. Lawrence continues to maintain its year-end backlog at zero.

As indicated in **Figure #21**, those with significant improvements in year-end backlogs during 2007 are Corning with a reduction of 95%, NYSEG with 71%, NGrid with 67%, KED NY with 37%, and Con Edison with 31%. KED LI and O&R also continued their trend of reducing their year-end backlogs by lowering the number of unrepaired leaks in each year since 2003.

After experiencing two years of significant increases in its leak backlog, Corning managed to improve from 105 at the end of 2006, down to five one year later.

The company reports finding more leaks than in the past, but has taken an aggressive approach to replacing leak-prone pipe and actively pursuing leak repairs to minimize its backlog when heading into winter. It hired qualified contractors in the fall of 2007 dedicated to aid in repairing leaks to reduce its backlog.

Central Hudson improved its leak backlog at the end of 2007 compared to its 2006 backlog. However, its backlog is still twice its level in 2005, and nearly four times its level in 2004. Central Hudson must work year long to manage leak surveys and repairs of potentially hazardous leaks in order to minimize its backlog when heading into winter. It has been identified in three reports in a row as needing to improve its management of repairable leaks.

NYSEG experienced increases in its backlog two years in a row after a significant improvement down to 11 in 2004. During 2007 it managed to reverse this trend and reduced its backlog from 31 at the end of 2006 down to 9 at the end of 2007. The company indicated its prioritized pipe replacement program and improved planning of leak repairs both contributed to its reduced leak backlog.

Both KED LI and KED NY were identified as outliers in the 2006 report. Both LDCs clearly made an effort during 2007 to reduce the number of active repairable leaks before heading into winter. Although they remain among the highest backlogs in the state, the continued improvement is an encouraging sign.

After two years of improving, NFG experienced a significant deterioration in its backlog at the end of 2007. It completed 2007 with a backlog of 140, or 29 greater than it had at the end of 2005. The company

reports that it discovered 62% more repairable leaks during the last six months of 2007 than it did during the same time in 2006. During the second half of 2007 it did manage to repair 35% more leaks over that same period in 2006, but was not able to match or better its year-end 2006 backlog of 77 leaks. The increase in leaks discovered meant an increase in resources was required to repair leaks before the beginning of the frost season.[12]

[12] NFG indicated its repairable leak backlog was down to 68 at the end of February 2008.

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.

- Mismark damages – Central Hudson, NFG, NYSEG, and O&R
- Company & Company Contractor damages – Central Hudson NYSEG, and O&R
- Excavator Error damages – Con Edison, Corning, NGrid, O&R, and St. Lawrence
- No-call damages – Central Hudson, O&R, and St. Lawrence
- Emergency Response (75% within 30 minutes) – KED NY and Corning
- Emergency Response (90% within 45 minutes) – Corning
- Leak Management – Central Hudson and NFG

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.

Over the past five years LDCs have collectively worked to improve performance in the key areas of safety identified in this report. There has been a 42% improvement in total damage performance, the 30-minute emergency response time has improved from 76.8% in 2003 to 80.8% in 2007, and the year-end leak backlog of potentially hazardous leaks has decreased 54%, from 1,154 to 528. 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 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 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. 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.

Appendix A

Reported & Computed LDC Damage Performance

2007 LDC Reported Totals	# One Call Tickets					Damages due to Mismarks					No-Call Damages				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Con Edison	77,576	87,340	94,083	99,375	118,380	53	53	70	57	47	62	107	110	85	84
Central Hudson	14,979	17,869	18,854	21,024	21,171	9	13	14	21	17	42	14	25	11	18
Corning	2,045	2,750	3,273	3,093	2,558	5	3	0	1	1	5	11	1	0	1
KED LI	70,718	83,137	80,402	94,156	105,488	70	88	98	80	73	214	296	270	295	201
KED NY	56,132	63,335	66,184	65,838	75,164	94	114	83	81	67	107	110	131	96	78
NFG	71,772	68,887	76,142	80,690	86,281	100	96	115	88	93	127	132	144	95	104
NGrid	73,613	77,667	87,517	91,286	85,985	140	94	158	156	95	129	115	139	93	67
NYSEG	51,252	48,590	60,046	66,178	61,629	36	41	35	17	25	54	39	34	27	28
O&R	17,274	17,512	18,995	22,559	22,395	21	19	23	13	23	52	41	44	39	48
RG&E	43,550	52,513	52,108	51,712	54,854	20	24	24	15	22	85	62	53	52	36
St. Lawrence	2,268	2,604	2,653	2,692	2,433	1	1	1	2	0	9	5	3	2	5

2007 LDC Reported Totals	Co. & Co. Contractor Damages					Excavator Error Damages					Total Damages				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Con Edison	47	37	30	24	23	129	88	81	70	133	291	285	291	236	287
Central Hudson	2	2	1	5	6	62	57	38	30	22	115	86	78	67	63
Corning	0	0	0	0	0	5	12	16	15	9	15	26	17	16	11
KED LI	24	34	14	15	5	204	125	126	86	112	512	543	508	476	391
KED NY	12	9	8	4	7	272	273	295	207	170	485	506	517	388	322
NFG	7	13	18	11	6	208	224	212	208	196	442	465	489	402	399
NGrid	13	23	12	10	7	374	294	404	283	276	656	526	713	542	445
NYSEG	5	0	5	5	10	104	113	107	67	90	199	193	181	116	153
O&R	13	37	25	18	21	87	72	57	59	68	173	169	149	129	160
RG&E	7	8	13	7	6	121	98	89	66	87	233	192	179	140	151
St. Lawrence	0	1	0	0	0	10	7	4	4	7	20	14	8	8	12

2007 LDC Computed Performance	# One Call Tickets					Damages due to Mismarks per 1000 Tickets					No-Call Damages per 1000 Tickets				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Con Edison	77,576	87,340	94,083	99,375	118,380	0.68	0.61	0.74	0.57	0.40	0.80	1.23	1.17	0.86	0.71
Central Hudson	14,979	17,869	18,854	21,024	21,171	0.60	0.73	0.74	1.00	0.80	2.80	0.78	1.33	0.52	0.85
Corning	2,045	2,750	3,273	3,093	2,558	2.44	1.09	0.00	0.32	0.39	2.44	4.00	0.31	0.00	0.39
KED LI	70,718	83,137	80,402	94,156	105,488	0.99	1.06	1.22	0.85	0.69	3.03	3.56	3.36	3.13	1.91
KED NY	56,132	63,335	66,184	65,838	75,164	1.67	1.80	1.25	1.23	0.89	1.91	1.74	1.98	1.46	1.04
NFG	71,772	68,887	76,142	80,690	86,281	1.39	1.39	1.51	1.09	1.08	1.77	1.92	1.89	1.18	1.21
NGrid	73,613	77,667	87,517	91,286	85,985	1.90	1.21	1.81	1.71	1.10	1.75	1.48	1.59	1.02	0.78
NYSEG	51,252	48,590	60,046	66,178	61,629	0.70	0.84	0.58	0.26	0.41	1.05	0.80	0.57	0.41	0.45
O&R	17,274	17,512	18,995	22,559	22,395	1.22	1.08	1.21	0.58	1.03	3.01	2.34	2.32	1.73	2.14
RG&E	43,550	52,513	52,108	51,712	54,854	0.46	0.46	0.46	0.29	0.40	1.95	1.18	1.02	1.01	0.66
St. Lawrence	2,268	2,604	2,653	2,692	2,433	0.44	0.38	0.38	0.74	0.00	3.97	1.92	1.13	0.74	2.06

2007 LDC Computed Performance	Co. & Co. Contractor Damages per 1000 Tickets					Excavator Error Damages per 1000 Tickets					Total Damages per 1000 Tickets				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Con Edison	0.61	0.42	0.32	0.24	0.19	1.66	1.01	0.86	0.70	1.12	3.75	3.26	3.09	2.37	2.42
Central Hudson	0.13	0.11	0.05	0.24	0.28	4.14	3.19	2.02	1.43	1.04	7.68	4.81	4.14	3.19	2.98
Corning	0.00	0.00	0.00	0.00	0.00	2.44	4.36	4.89	4.85	3.52	7.33	9.45	5.19	5.17	4.30
KED LI	0.34	0.41	0.17	0.16	0.05	2.88	1.50	1.57	0.91	1.06	7.24	6.53	6.32	5.06	3.71
KED NY	0.21	0.14	0.12	0.06	0.09	4.85	4.31	4.46	3.14	2.26	8.64	7.99	7.81	5.89	4.28
NFG	0.10	0.19	0.24	0.14	0.07	2.90	3.25	2.78	2.58	2.27	6.16	6.75	6.42	4.98	4.62
NGrid	0.18	0.30	0.14	0.11	0.08	5.08	3.79	4.62	3.10	3.21	8.91	6.77	8.15	5.94	5.18
NYSEG	0.10	0.00	0.08	0.08	0.16	2.03	2.33	1.78	1.01	1.46	3.88	3.97	3.01	1.75	2.48
O&R	0.75	2.11	1.32	0.80	0.94	5.04	4.11	3.00	2.62	3.04	10.02	9.65	7.84	5.72	7.14
RG&E	0.16	0.15	0.25	0.14	0.11	2.78	1.87	1.71	1.28	1.59	5.35	3.66	3.44	2.71	2.75
St. Lawrence	0	0.38	0.00	0.00	0.00	4.41	2.69	1.51	1.49	2.88	8.82	5.38	3.02	2.97	4.93

Appendix B

Reported Emergency Response Data

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

# Calls	2003	2004	2005	2006	2007
Central Hudson	4,587	4,724	4,999	4,075	4,442
Corning	716	722	1,487	1,036	1,432
Con Edison	31,749	33,527	30,478	28,356	29,880
KED LI	30,593	28,459	27,922	25,034	23,486
KED NY	64,431	59,046	53,200	49,034	47,688
NFG	33,288	30,207	29,543	25,743	27,740
NGrid	28,602	27,507	25,206	22,682	23,465
NYSEG	10,210	9,487	9,999	8,995	9,828
O&R	8,231	8,260	8,033	7,656	7,820
RG&E	14,882	14,248	13,917	12,123	12,185
St. Lawrence	616	590	493	396	436
Total:	227,905	216,777	205,277	185,130	188,402

Appendix C

Reported Leak Data

	2007 Total Leak Repairs on Mains by Type							
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,555	79	0	66	16	2,797	0	0
Central Hudson	0	59	0	38	12	94	0	0
Corning	232	9	4	5	6	0	0	1
KED LI	966	205	26	48	69	241	0	0
KED NY	129	0	0	39	9	2,615	0	0
NFG	2,429	0	0	109	96	460	0	20
NGrid	73	76	0	0	11	621	0	0
NYSEG	55	0	0	38	14	0	0	0
O&R	207	0	0	3	52	38	0	0
RG&E	111	17	0	183	13	71	0	0
St. Lawrence	0	0	0	0	0	0	0	0

	2007 Total Leak Repairs on Services by Type							
	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast/Wrt. Iron	Copper	Other
Con Edison	2,671	169	0	448	129	0	271	0
Central Hudson	0	80	0	61	19	0	0	0
Corning	88	6	0	3	1	0	0	3
KED LI	1,176	263	34	45	237	0	22	0
KED NY	392	0	0	139	103	0	238	0
NFG	753	0	0	78	152	0	0	27
NGrid	434	197	0	0	81	0	17	0
NYSEG	73	0	0	32	89	0	0	3
O&R	193	0	0	5	57	0	0	0
RG&E	142	39	0	174	51	0	17	0
St. Lawrence	0	0	0	4	2	0	0	0

Backlog of Leaks Requiring Repair

LDC	Leak Backlog - Type 1, 2, and 2a				
	2003	2004	2005	2006	2007
Con Edison	98	106	91	61	42
Central Hudson	30	14	27	63	54
Corning	6	2	58	105	5
KED LI	419	177	151	143	111
KED NY	139	197	166	158	99
NFG	172	213	111	77	140
NGrid	151	56	43	48	16
NYSEG	52	11	25	31	9
O&R	55	47	44	34	29
RG&E	32	30	27	29	23
St. Lawrence	0	0	0	0	0
Total:	1,154	853	743	749	528

Repaired Leaks Requiring Repair

LDC	Leaks Repaired - Type 1, 2, and 2a				
	2003	2004	2005	2006	2007
Con Edison	7,769	7,498	6,445	6,312	7,509
Central Hudson	184	199	252	295	243
Corning	58	109	138	219	319
KED LI	6,327	4,127	3,730	3,359	2,651
KED NY	5,359	4,174	3,553	3,120	3,307
NFG	2,741	2,157	2,032	2,042	2,375
NGrid	1,407	1,446	1,212	1,067	1,264
NYSEG	665	713	432	385	148
O&R	456	716	528	499	374
RG&E	1,022	1,210	677	451	521
St. Lawrence	5	3	4	1	5