

# STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE



## 2013 GAS SAFETY PERFORMANCE MEASURES REPORT (CASE 14-G-0176)

Safety Section  
Office of Electric, Gas & Water  
June 26, 2014

**EXECUTIVE SUMMARY**

The performance measures are the result of collaborative efforts, started in 2003, 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.<sup>1</sup> Overall, the data indicates that LDC performance has substantially improved across the state over the eleven year period. The Total Damage Prevention measure improved for the eleventh consecutive year, and is now 70.6% better than it was in 2003. The 30-minute emergency response time has improved from 76.8% in 2003 to 83.2% in 2013, and the year-end leak backlog of potentially hazardous leaks has decreased 90.6%, from 1,154 to 108. As LDCs continue their outreach efforts, adopt better practices in responding to leak and odor calls, and work to replace leak prone infrastructure, Staff expects further improvements will occur.

Staff recommends those LDCs identified as having improvement opportunities conduct a self-analysis, and provide it to Staff within 45 days of receiving a letter from Staff. LDCs should provide specific details on how they plan to improve performance. A more detailed discussion of the 2013 results for each performance measure follows.

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<sup>1</sup>This report examines the results of New York State natural gas local distribution companies' (LDCs) performance in three specific safety areas (Damage Prevention, Emergency Response, and Leak Management) for 2013. The New York State Department of Public Service, Gas Safety Section has been producing this annual report since 2004.

### Damage Prevention

The first measure, Damage Prevention, gauges the ability of LDCs to minimize damage to buried facilities caused by excavation activities. The damage measure is further broken down into four categories: damages due to (1) Mismarks (inaccurate marking by the LDC of its buried facilities); (2) Company and Company Contractor error; (3) third party Excavator error; and (4) No-calls (failure to provide notice of intent to excavate to the one-call notification system).

Overall, Damage Prevention performance across the state improved 4.7% during 2013. The number of requests to locate underground gas facilities (one call tickets) received by the LDCs increased nearly 7.9% in 2013, largely driven by NGrid LI and NGrid NY which experienced a 35.3% and 14.4% increase, respectively. This increase can be directly attributed to Hurricane Sandy and its reconstruction projects.

Three of the four categories composing the Total Damage measure showed continued improvement during 2013, with damages due to No-calls declining in performance. The greatest improvements came in damages due to Company and Company Contractor error (20.0%), followed by Mismarks (18.2%), and lastly Excavator error (2.9%).

Compared to 2012, all LDCs experienced varying combinations of improvement and decline among the four categories. Despite slight improvements by NGrid Upstate and NFG, these two LDCs, plus O&R, are pulling down the statewide performance level. These three LDCs have been identified by the Commission in previous reports as needing to improve performance in the various categories of the total damage prevention metric.

### **Emergency Response**

The second measure, Emergency Response, gauges the LDCs ability to respond promptly to reports of gas leaks or emergencies by examining the percentage of calls that fall within various response times. The 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. Statewide performance for the 30 minute, 45 minute, and 60 minute goals all improved in 2013. This overall general improvement is consistent with that of the past eleven years. Staff attributes this general improvement to LDCs adopting more efficient work practices, fewer numbers of leak and odor calls, utilization of new technologies such as global position systems (GPS) to quickly identify the most appropriate employee to respond to a gas leak or odor call, continued public awareness initiatives on the properties of natural gas, and placement of existing or additional personnel in certain geographical areas during the times of day that have historically high volumes of emergency notifications.

### **Leak Management**

The third measure, Leak Management, examines LDCs performance in effectively maintaining leak inventories and keeping potentially hazardous leaks to a minimum. The measure focuses on the year-end backlog of leaks requiring repair. The end of the calendar year is regarded as the beginning of the frost season, when there is a greater chance of gas migration into a building because the gas can't vent as readily through the ground to the atmosphere due to the blanket of frost. All LDCs have demonstrated improvement over the past several years.

The statewide year-end 2013 backlog was down a total of 49 leaks (31.2%) from year-end 2012, and is down 90.6% when compared to 2003.

### **Next Steps**

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

This report will be transmitted to an executive level operating officer of each LDC. For those LDCs identified as having improvement opportunities, Staff recommends that those companies conduct a self-analysis, and provide it to the Safety Section of the Office of Electric, Gas, and Water within 45 days of receiving a letter from Staff. The analysis should include specific details on how the LDC plans to improve performance. For LDCs that have repeatedly been identified as needing improvement in specific areas, Staff recommends those LDCs evaluate the effectiveness of their past efforts to determine the additional approaches to be utilized.

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**COMPANY ACRONYMS**

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

**HISTORICAL CASE NUMBERS<sup>2</sup>**

<b>Year Analyzed</b>	<b>Report Case Number</b>
2003	04-G-0457
2004	05-G-0204
2005	06-G-0566
2006	07-G-0461
2007	08-G-0413
2008	09-G-0454
2009	10-G-0225
2010	11-G-0242
2011	12-G-0222
2012	13-G-0213

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<sup>2</sup>The appendices to this report include the most recent year under analysis plus the four previous years. This table is provided to aid those wishing to research prior years.



**INTRODUCTION**

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

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 gas 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 2013**

Throughout this report, all of the figures display performance results for 2009-2013 for each LDC with the grey columns in the bar graphs representing 2009-2012, and the black columns representing the 2013 results. The blue horizontal lines on the bar graphs represent the 2013 statewide performance level. When no bar is shown in the graph for a particular company and year, there were no incidents for that measure. 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 one of the leading causes 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,<sup>3</sup> 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

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<sup>3</sup> New York has two One-call systems, one for New York City and Long Island, and the second for the remainder of the State.

operating territory provides a useful basis for assessing performance in this area. The data used in this analysis are contained in **Appendix A** and **Appendix B**. The method used to normalize each LDC's data is the number of facility damages per 1,000 one-call tickets.

The numbers of damages are categorized by damages resulting from Mismarks, Excavator Error, Company and Company Contractor Error, and No-calls.

Each one-call ticket received provides an LDC the opportunity to mark its facilities correctly. Hence, the Mismatch measure specifically addresses this by examining damages caused by Mismarks per 1,000 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. Damage due to third party Excavator Error per 1,000 tickets tracks this category. Third party Excavator Error damages are historically the largest component of Total Damages, partially because it entails the most effort to educate third party contractors. Most professional excavators are well aware of the existence of the one-call centers and the requirement to notify it of planned excavation work. Many excavators are not as well versed in the additional requirements such as tolerance zones and verifying locations of underground facilities with hand-dug test holes, maintaining the marks, maintaining clearances with powered equipment, etc. Educating excavators on how to avoid damages once markouts have been requested requires more in depth training and outreach.

Damages that are caused by LDC personnel, or by LDC direct contractors, are also included in the damage analysis as a separate category. These personnel should have the training and experience to work carefully near their own facilities.

LDCs should also have better control over contractors they hire to perform work for them than they do over third party contractors. Thus, this category should 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 an electric and gas combination LDC, damages to gas facilities caused by electric crews or electric company contractors are included.

Damages due to No-calls are instances where no ticket exists because the excavator failed to 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 indicate 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 2013, 99.81% of one-call tickets in LDC gas areas had no associated damages to natural gas facilities. This is consistent with the findings reported in the Common Ground Alliance's (CGA)<sup>4</sup> report 2012 Damage Information Reporting Tool (DIRT) which states, "... data suggests that when a call is made prior to excavation, damage occurs less than 1.0% of the time."

There were a total of 1,595 damages to natural gas LDC facilities in 2013, 44 more than in 2012. However, when these damages are normalized with the increase of 61,092 one-call

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<sup>4</sup> The Common Ground Alliance is a national association of stakeholders involved in damage prevention that identifies and disseminates best practices, conducts public awareness programs, and collects and analyzes data regarding damages to underground utility facilities.

tickets (7.9%) during 2013, the result is an improvement (4.7%) in Total Damages per 1,000 one-call tickets. While these are encouraging statistics, a single damage could lead to a catastrophic event, so it is important that LDCs and excavators strive to minimize damage to facilities.

The Department enforces the Commission’s damage prevention regulations – 16 NYCRR Part 753 – Protection of Underground Facilities. Over the past five years approximately 1566 citations have been issued leading to over \$647,000 in penalties collected.

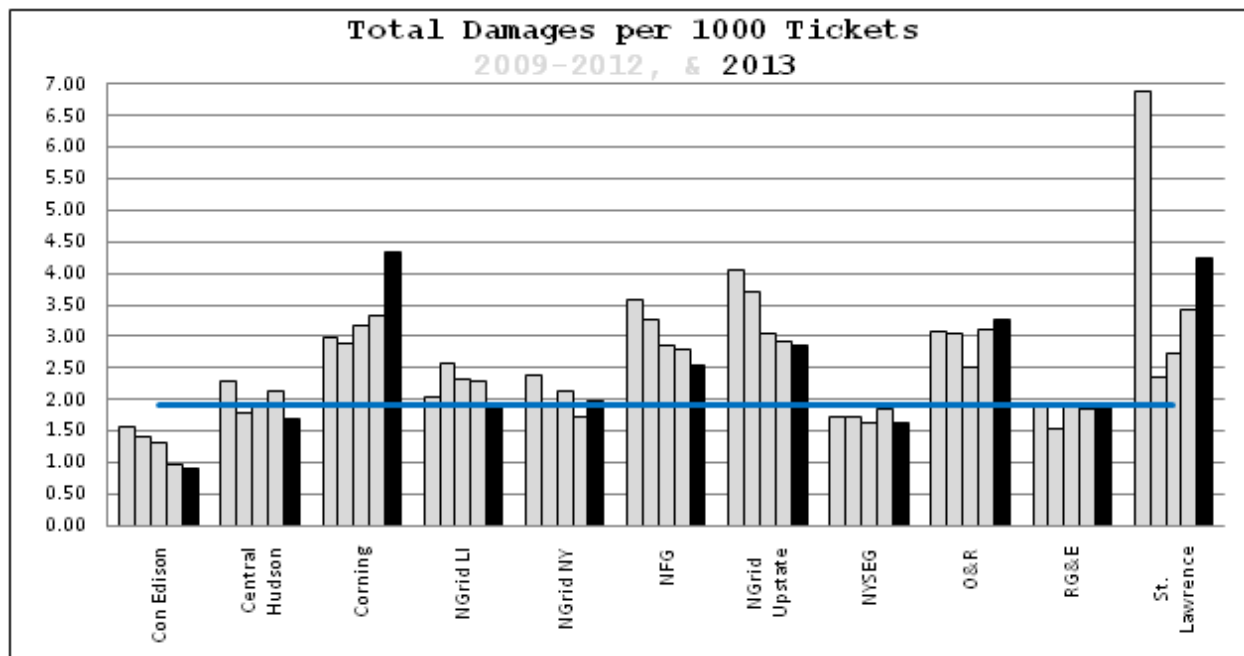
**Figure #1** below displays the collective statewide performance regarding the damage prevention measures. Note the significant increase in the number of tickets over the period. Also take note of the significant improvement in the Total Damages measure.

Metric	2009	2010	2011	2012	2013
Number of Tickets	719,475	729,067	735,041	771,749	832,841
Mismarks	0.54	0.50	0.45	0.44	0.36
Co. & Co. Contractor Error	0.11	0.10	0.10	0.10	0.08
Excavator Error	1.27	1.18	1.12	1.04	1.01
No-calls	0.54	0.50	0.47	0.43	0.46
Total Damages (per 1000)	2.80	2.29	2.14	2.01	1.92

**Figure #1** – Damages per 1,000 Tickets Statewide

Three of the four metrics composing the Total Damage measure improved during 2013.<sup>5</sup> The greatest statewide improvement in 2013 came in damages due to Company and Company Contractors, damages due to Mismarks, and damages due to Excavator Error. Statewide performance in damages due to No-calls declined. The total number of tickets increased approximately 7.9% during 2013 versus 2012. The LDCs which experienced the largest increase in tickets were NGrid LI (35.3%) and NGrid NY (14.4%). Central Hudson, Con Edison, NGrid LI, NGrid NY, NFG, NYSEG, and O&R experienced an increase in tickets as well. Each LDC's actual performance in each area of damage prevention is located in **Appendix A** and **Appendix B**.

LDC performance in Total damages per 1,000 tickets is displayed in **Figure #2** below.



**Figure #2** - Total Damages per 1,000 Tickets Statewide

<sup>5</sup> The Total Damage performance may not equal the sum of the four metrics due to rounding.

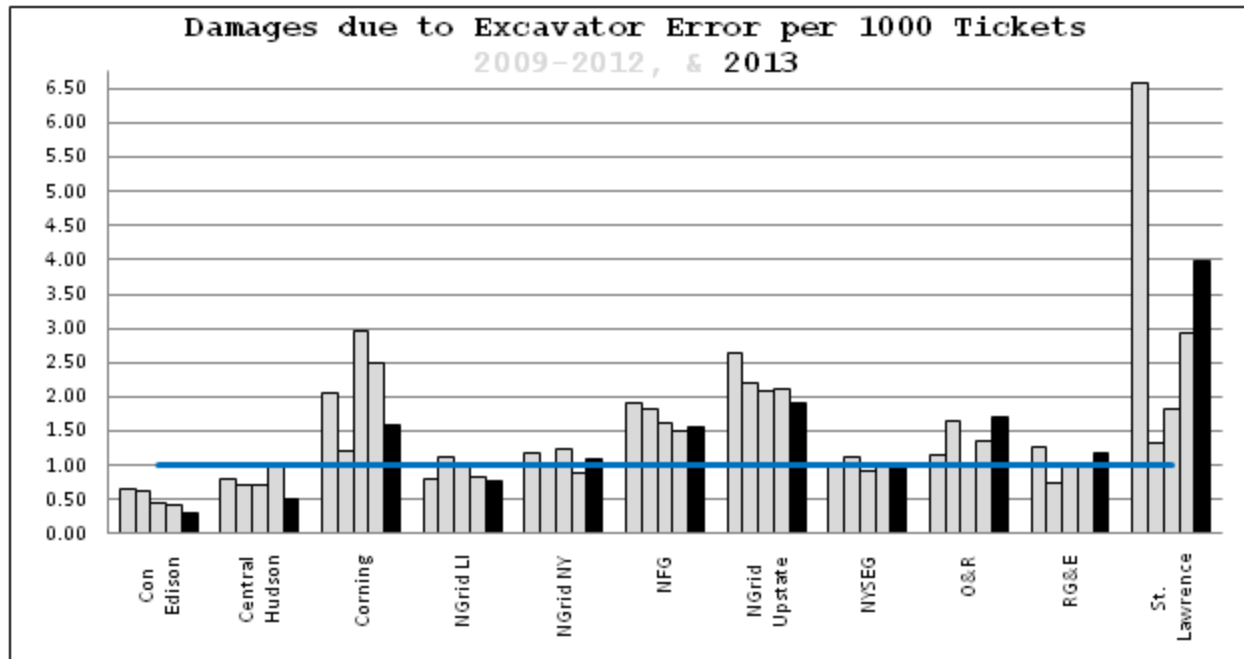
As seen in **Figure #2**, six LDCs improved and five LDCs declined in 2013, which is consistent with 2012. Among those improving, Central Hudson made the most significant gain (20.5%) driven mainly by improvements in Excavator Error damages.

Corning experienced a difficult year in 2013 with a level of damages not reached since 2007. Its deterioration in 2013 was driven by increases in Mismatch and No-call damages. In 2012 Corning experienced a single damage due to Mismarks and two damages due to No-calls. In 2013 Corning experienced four damages due to Mismarks and seven damages due to No-calls. In 2013 Corning improved in damages due to Excavator Error.

St. Lawrence experienced a significant increase in damages due to Excavator Error, which contributed to its decline in Total Damages. However, in 2013 St. Lawrence experienced a single damage due to Mismarks and zero damages due to No-calls and Company & Company Contractor Error.

Due to Corning's and St. Lawrence's relatively low volume of One-call tickets (4,386 and 4,021, respectively), and the fact that the number of damages in the four categories are typically in the single digits or even zero, small swings in the number of damages year-to-year have a magnified impact on performance compared to other LDCs.

LDC performance in damages due to third party Excavator Error per 1,000 tickets is displayed in **Figure #3** below.



**Figure #3** - Excavator Error Damages per 1,000 Tickets Statewide

As seen in **Figure #3**, six LDCs improved and five LDCs declined in 2013, which is consistent with 2012. In 2012, Central Hudson, O&R, and St. Lawrence experienced the most significant performance declines in damages due to Excavator Error (42.0%, 31.6%, and 60.8%, respectively). In 2013 Central Hudson improved greatly (49.1%), while O&R (26.2%) and St. Lawrence (36.0%) continued to decline in performance. In actual numbers, O&R went from 34 in 2012 to 43 in 2013, and St. Lawrence went from 12 to 16. Both O&R's and St. Lawrence's performance is of concern because it is the third consecutive year of significant deterioration.

The overall statewide improvement in this metric was driven by improvements with the following LDCs: Con Edison, Central Hudson, Corning, NGrid LI, and NGrid Upstate.

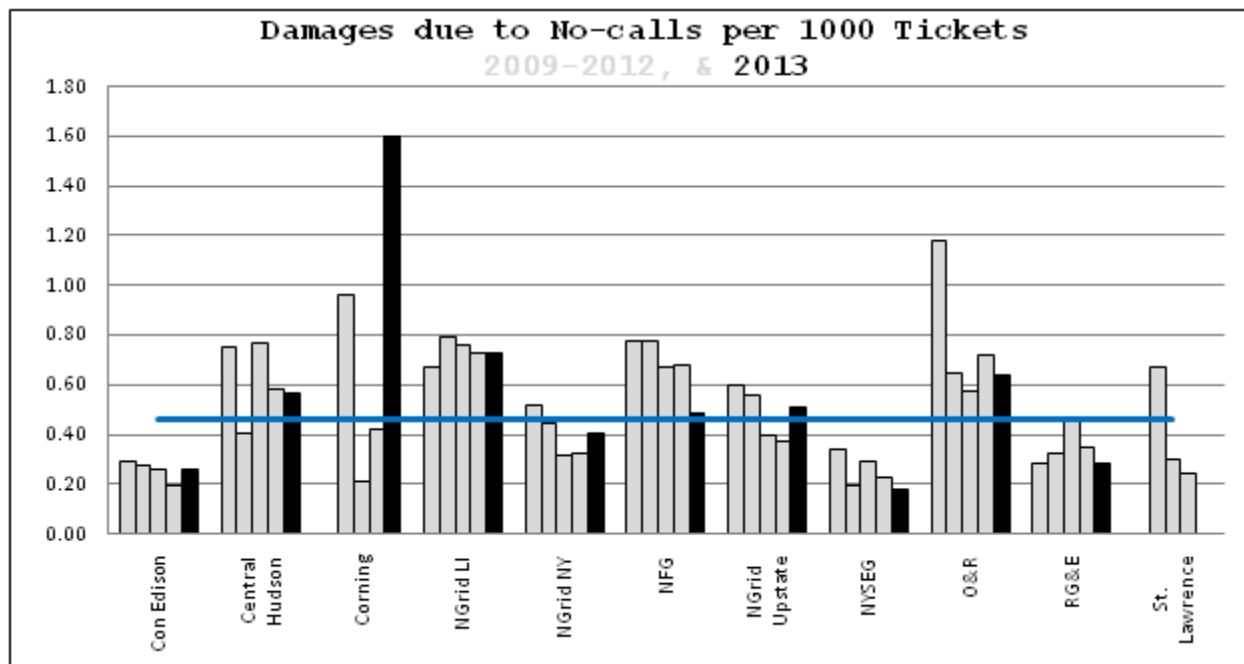
NFG and NGrid Upstate continue to remain outliers in this category and their performance is significantly worse than the statewide level. These two LDCs have been identified in



several reports as needing improvement in this area. NFG and NGrid Upstate need to reduce these types of damages and make additional efforts to reach out to the excavating community.

It is recommended that NFG, NGrid NY, NGrid Upstate, O&R, RG&E, and St. Lawrence perform an analysis of their damage prevention programs and outreach efforts to identify methods to further reduce these damages.

LDC performance in damages due to No-calls per 1,000 tickets is displayed in **Figure #4** below.



**Figure #4** - No-call Damages per 1,000 Tickets (Statewide)

As seen in **Figure #4**, six LDCs improved, four declined, and one remained consistent in 2013. In last year's report, Corning, and O&R were identified as poor performers. In 2013, Corning's performance declined for the second consecutive year by 282.6% (in raw numbers, Corning went from 2 to 7 damages), and O&R improved by 11.3%. Corning's normalized

performance was also impacted by the decrease in total number of One-Call Tickets (8.5%).

Other contributing poor performing LDCs which led to the overall statewide decline (7.0%) were Con Edison, NGrid NY, and NGrid Upstate. Con Edison experienced a decline of 35.3%, NGrid NY a decline of 27.4%, and NGrid Upstate a decline of 35.8%. In raw numbers, Con Edison went from 32 to 46 damages, NGrid NY went from 35 to 51 damages, and NGrid Upstate went from 33 to 44 damages. Central Hudson, NFG, NYSEG, O&R, RG&E, and St. Lawrence all improved in 2013.

It is recommended that Con Edison, Corning, NGrid NY, and NGrid Upstate perform an analysis of their damage prevention programs, targeting damages due to No-calls, and to identify efforts to further improve in this area. Their analyses of this year should include a review of the effectiveness of previous efforts and consideration of new approaches.

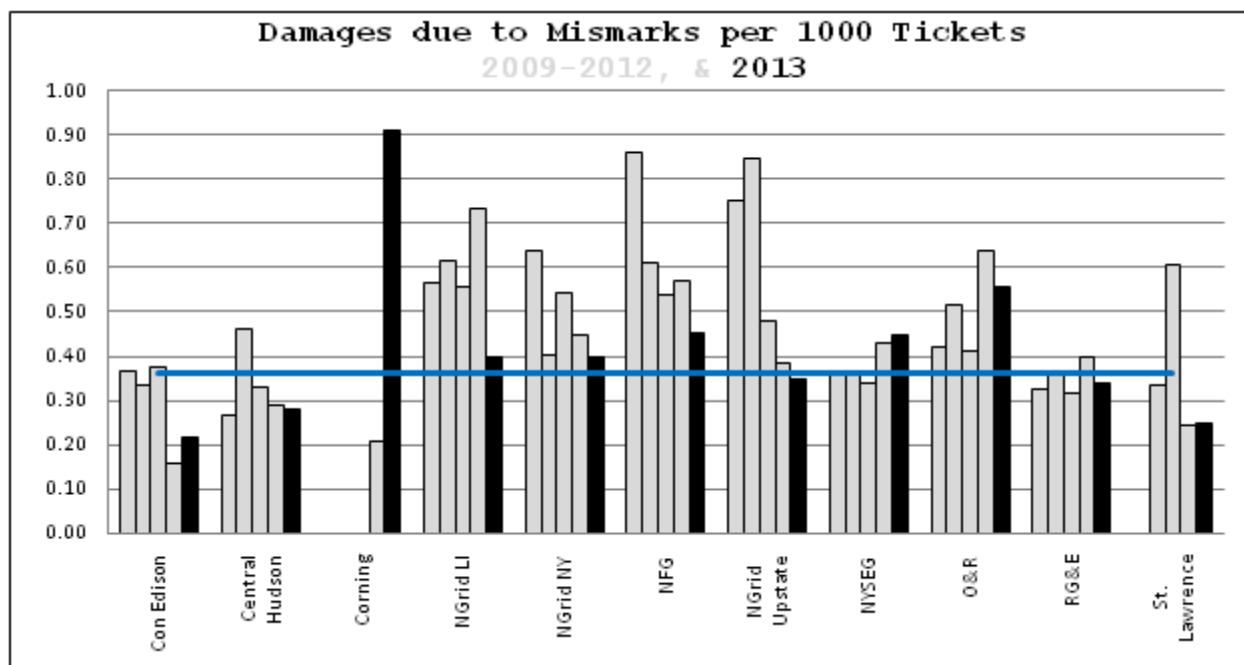
This statewide increase in damages due to No-calls indicates that excavators need to be more aware of their obligation to utilize the one-call system. Key contributors to improve this metric come in the form of the three digit 811 dialing program, enforcement action for violations of 16 NYCRR Part 753, and outreach and training efforts made by LDCs and one-call centers.

In order to aid in the enforcement of 16 NYCRR Part 753, Staff requested that LDCs 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 is a deterrent to non-compliance. Where appropriate, enforcement cases are resolved by a "Consent Order" agreement where the financial penalty is reduced if the excavator attends

free Dig Safely training provided by one-call centers. In recent years Corning has not been an active participant in this effort. Due to Corning's significant decline in performance and damages due to No-calls, it is strongly encouraged to report these damages to Staff.

On March 29, 2013, General Business Law was amended which subsequently increased penalties for violations of 16 NYCRR Part 753. It is expected that these higher penalties will reduce damages and encourage compliance.

LDC performance in damages due to Mismarks per 1,000 tickets is displayed in **Figure #5** below.



**Figure #5** - Mismark Damages per 1,000 Tickets Statewide

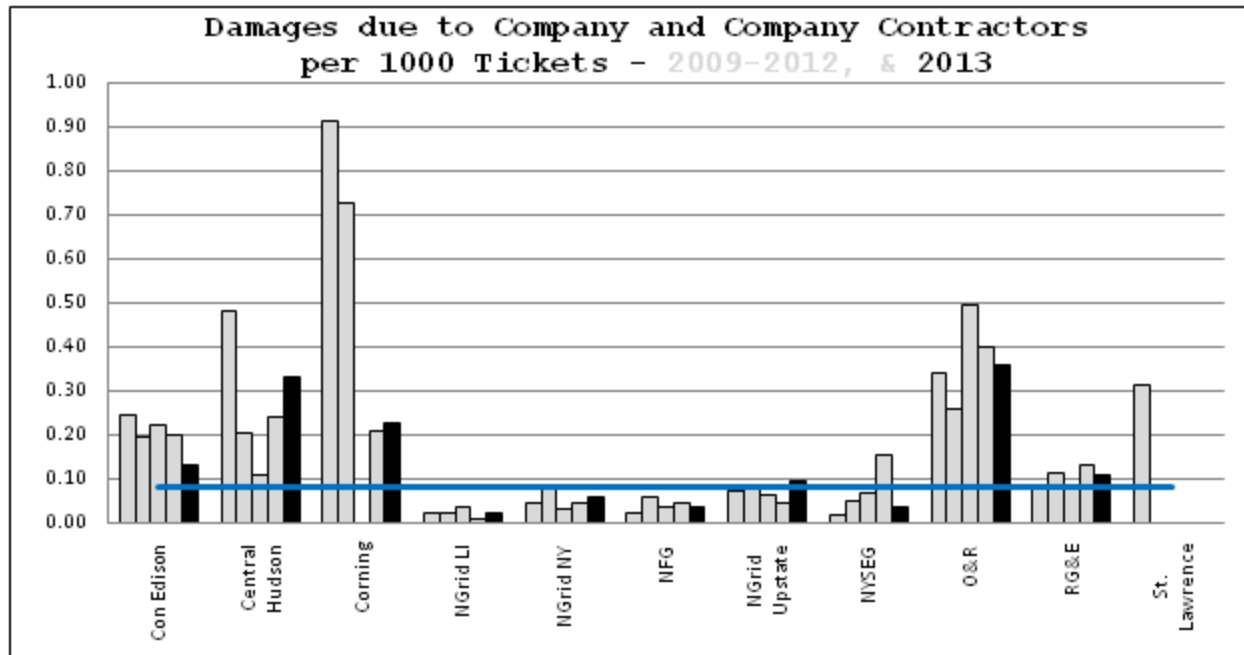
As seen in **Figure #5**, seven LDCs improved and four LDCs declined in 2013. In last year's report, Corning, NGrid LI, NYSEG, O&R, and RG&E were identified as poor performers. In 2013, Corning declined for the second consecutive year by 337.2% (in raw numbers, Corning went from 1 to 4 damages). NGrid LI

improved (45.6%), NYSEG declined slightly (3.7%), O&R improved (12.7%), and RG&E improved (14.7%). Corning's large percentage-wise increase in damages, coupled with its decrease in one-call tickets (8.5%) lead to a large spike in this measure. In 2013, Con Edison declined (37.6%) going from 26 to 38 damages. This increase in damages can be normalized by an increase of 10,353 one-call tickets.

The overall statewide measure for damages due to Mismarks improved significantly (18.2%), and was driven by the following LDCs: NGrid LI (45.6%), NGrid NY (10.8%), NFG (20.6%), NGrid Upstate (10.1%), O&R (12.7%), and RG&E (14.7%).

Staff expects to see general improvement in damages due to Mismarks as LDCs continually adopt best practices to locate their facilities and develop better controls over their locating contractors. Con Edison and Corning are both recommended to evaluate their locating programs and adopt methods that could further improve markout accuracy.

LDC performance in damages due to Company and Company Contractors per 1,000 tickets is displayed in **Figure #6** below.



**Figure #6** - Company and Company Contractor Error Damages per 1,000 Tickets Statewide

As seen in **Figure #6**, five LDCs improved, five LDCs declined, and St. Lawrence stayed consistent with zero damages in 2013. In last year's report, Central Hudson, NGrid NY, NFG, NYSEG, and RG&E were identified as poor performers. In 2013, Central Hudson (36.1%), and NGrid NY (22.4%) declined for the second consecutive year in a row. In raw numbers, Central Hudson and NGrid NY both went from 5 to 7 damages. Corning experienced one damage in 2013 (same as 2012), but due to its decline in one-call tickets its normalized performance declined. NFG improved by 25.6%, NYSEG improved by 76.8%, and RG&E improved by 19.2%. Other poor performers in 2013 include NGrid LI (195.7%), and NGrid Upstate (103.7%). In raw numbers, NGrid LI went from 1 to 4 damages, and NGrid Upstate went from 4 to 8 damages.

With the Commission's encouragement, the LDCs have increased the proactive replacement of leak-prone pipe in recent

years. This leads to more excavation activity by Company and Company Contractor forces near their own buried gas lines, which increases the opportunity for damages to occur. Even with this increased excavation activity, statewide performance in this metric improved significantly (20.0%). On the other hand, and as these annual performance measures reports have pointed out for many years, LDCs should also have better control over contractors they hire to perform work for them than they do over third party contractors, and these personnel should have the training and experience to work carefully near their own facilities. The LDCs point out that often times these damages are to facilities they are in the process of replacing anyway, and when damage occurs, their own crews and contractors are better prepared than third party contractors to promptly control the situation and make repairs. While true, Staff believes that LDCs should not minimize this category of damages. These damages still have the potential to harm nearby members of the public. All damages are not only safety concerns, but have the potential to lead to service outages, and other disruptions such as road closures and evacuations.

For the first time since 2010, damages due to Company and Company Contractors improved at the statewide level. As noted above, this metric has the lowest raw number of damages, is the smallest contributor to the total number of damages, and is the smallest contributor to the total statewide damage measure. Also, note that the vertical scale on **Figure #6** makes the year-to-year changes appear more dramatic than they would be in **Figures #2, #3, and #4**. This also further exaggerates the fluctuations to the smaller LDCs.

It's been noted several times how the smaller LDCs can have dramatic swings year-to-year. For the second consecutive year, the data suggests that even the larger LDCs can have

sizable swings in performance. As the actual numbers of damages get smaller, these swings become larger in percentage.

With a narrow view in comparing data over the past few years, it is worth taking a step back and looking at this year's data in relation to the first year of such reporting. **Figure #7** displays the collective statewide performance regarding the damage prevention measures from calendar years 2003 and 2013.

Metric	2003	2013
Number of Tickets	481,179	832,841
Mismarks	1.14	0.36
Co. & Co. Contractor Error	0.27	0.08
Excavator Error	3.28	1.01
No-calls	1.84	0.46
Total (per 1000)	6.53	1.92

**Figure #7** - Damages Comparison from 2003 to 2013

**Emergency Response**

16 NYCRR §255.825(d) requires that LDCs provide a monthly report to Staff that includes a breakdown of the total number of gas leak and emergency calls received during the month and responded to in intervals of 15 minutes during normal business hours, weekdays outside business hours, and weekends and holidays. The report also indicates the percentage of calls responded to within 30, 45, and 60 minutes. The following have been established as acceptable overall response time standards: 75% within 30 minutes, 90% within 45 minutes, and 95% within 60 minutes. Each company has a very small number of instances of response times exceeding 60 minutes.<sup>6</sup>

The intent of the reporting requirement and the performance measure is to evaluate company responses to gas leak, odor, and emergency calls that are generated by the public and other authorities (e.g. police, fire, and municipal employees). For the purposes of reporting, the response time is measured from the time the call is sent to the company to the time of arrival of qualified<sup>7</sup> company personnel at the location.

When an LDC responds to an odor call, 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.

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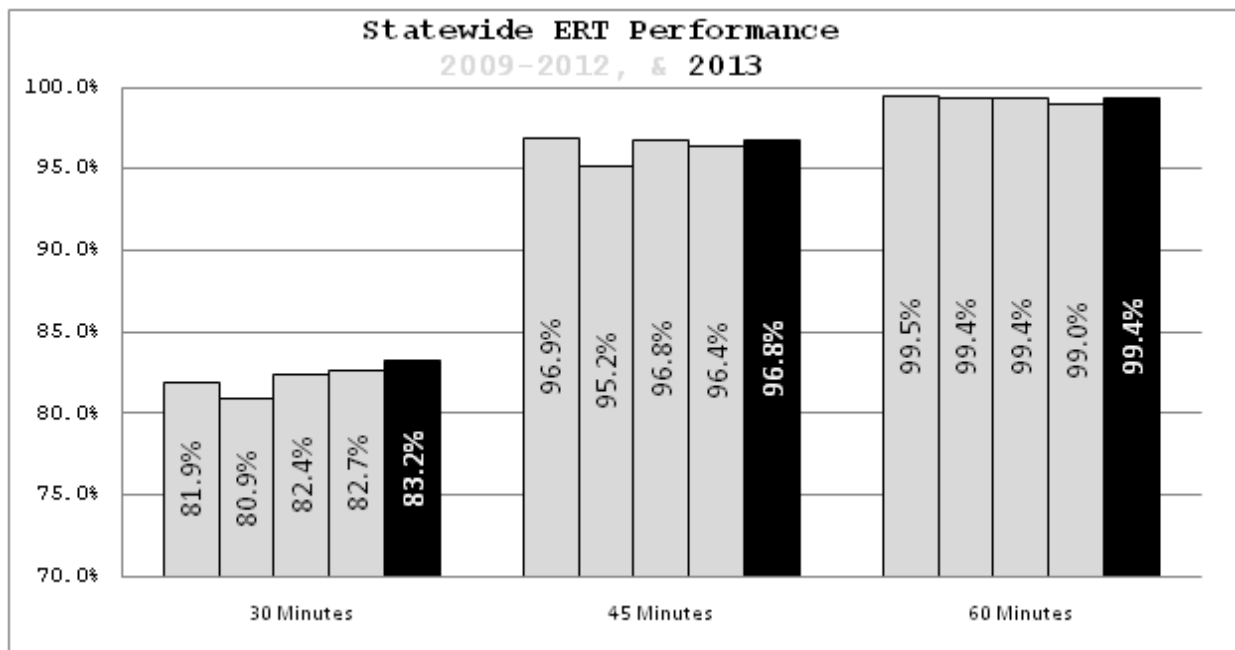
<sup>6</sup> The LDCs are expected to review the circumstances of each instance exceeding 60 minutes and where possible, work towards their elimination.

<sup>7</sup> Qualified personnel is defined as company representatives who are properly trained and equipped to investigate gas leak and odor reports in accordance with accepted company procedures and 16 NYCRR §255.604 - Operator Qualification.



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

**Figure #8** displays the collective annual statewide Emergency Response Time (ERT) performance for each goal since 2009, with the 2013 performance presented in black. In 2013 the 30 minute statewide performance achieved its highest level since data has been collected in 2003. The 45 and 60 minute statewide performance both improved during 2013. All three categories exceeded their minimum goals of 75%, 90%, and 95%.



**Figure #8** - Emergency Response Time Performance Statewide

**Figure #9** presents data for calendar years 2009 through 2013 arranged by LDC and percentage of response times achieved within 30 minutes. Performances that did not meet the minimum goal of 75% are shown in red.

LDCs	2009	2010	2011	2012	2013
Central Hudson	81.6%	80.0%	78.3%	79.7%	78.5%
Corning	81.0%	83.1%	83.8%	88.0%	81.9%
Con Edison	80.8%	81.8%	83.5%	87.6%	88.9%
NGrid LI	76.5%	76.0%	77.3%	73.8%	77.7%
NGrid NY	77.2%	78.2%	77.1%	76.0%	76.7%
NFG	89.8%	91.8%	91.8%	91.6%	92.7%
NGrid Upstate	84.0%	82.9%	82.5%	84.1%	80.2%
NYSEG	81.9%	80.2%	82.3%	80.4%	80.1%
O&R	81.0%	82.8%	83.4%	87.5%	86.5%
RG&E	92.4%	90.8%	90.3%	88.9%	84.7%
St. Lawrence	82.7%	77.9%	75.5%	74.5%	71.3%

**Figure #9** - Emergency Response Times for 30 Minutes

St. Lawrence was the only LDC which failed to meet the 75% Emergency Response Time goal within 30 minutes in 2013. This marks the second consecutive year St. Lawrence failed to meet this measure. St. Lawrence performed poorly in the first (70.1%), third (70.8%), and fourth (67.1%) quarters. However, St. Lawrence did meet the 90% goal for 45 minutes (92.9%) and the 95% goal for 60 minutes (99.2%). Staff recommends that St. Lawrence perform a self analysis of its performance in this area and respond with steps to improve.

All LDCs met the 45 minute and 60 minute goals. The data for the 45 minute and 60 minute emergency response times are provided in **Appendix C**.

Over the eleven years of the collected data, leak and odor calls statewide have decreased from 227,905 in 2003, to 157,261 in 2013, or a 31.0% decrease over the period. Part of the decline in calls may be attributed to the reduction of leak backlogs, which will be discussed further under the Leak Management section.

It is encouraging to see that all LDCs have made efforts over the years to reach the statewide goals jointly established for this measure. Staff expects all LDCs to continue to evaluate and monitor their performance and identify areas where best practices can be implemented.

### **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 of potentially hazardous leaks at the end of the year. The natural gas safety regulations contained in 16 NYCRR Part 255 include requirements for classifying 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 can't 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 the calendar year is significant since it's typically the beginning of the frost season. Thus, all data analyses are presented as of December 31, for each year (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 potentially hazardous leaks. This measure does not substitute for, and is not a reflection upon, any LDCs' compliance with the gas safety regulations.

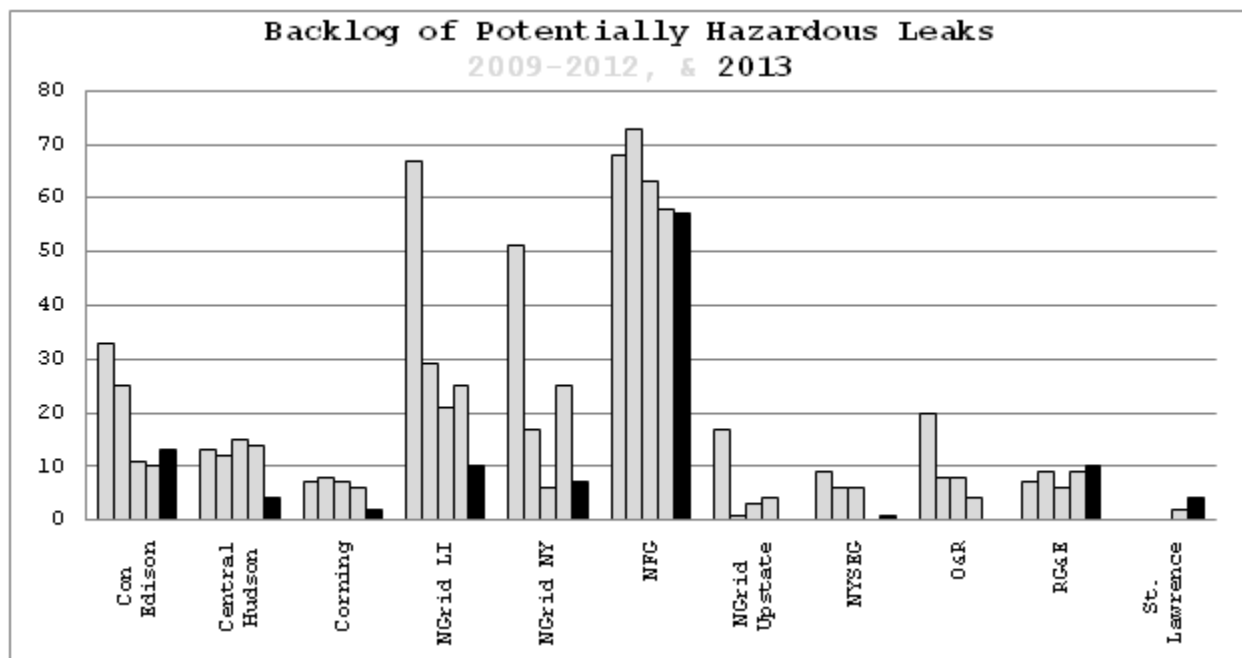
The data reported by the LDCs include leaks found, and leaks repaired on mains and services categorized by leaks discovered by type of leak, leaks repaired on mains by type of pipe material, leaks repaired on services by type and pipe material, and backlog of leaks by type.

Analysis of leakage data can also provide an indication of the pipe material's susceptibility to leakage. As one mean of continuously improving leak management programs, Staff encourages the identification and removal of leak prone pipe, such as cast iron, bare or poorly coated steel pipe that is difficult to protect against corrosion, and certain brittle plastic materials. Incentive programs to replace deteriorating and leak prone infrastructure and/or reducing leak backlogs have been incorporated into past and current rate agreements for LDCs. The long-term goal is to eliminate pipeline infrastructure that, due to its vulnerability to leaks, presents greater safety risks to the public. As the aging pipe infrastructure is replaced by more modern materials, general leak concerns should decrease over time.

The statewide year-end backlog of potentially hazardous leaks decreased significantly from 157 in 2012 to 108

in 2013, and is down 90.6% when compared to 1154 in 2009. This demonstrates that LDCs are paying more attention to managing leak surveys and completing them earlier in the year to allow for time to repair discovered leaks before heading into the frost season.

**Figure #10** displays the backlog of potentially hazardous leaks (Type 1, 2A, and 2)<sup>8</sup> on December 31<sup>st</sup> of 2009 through 2013. Numerical leak data is contained in **Appendix E**.



**Figure #10** - Leak Backlog from 2009 through 2013

As indicated in **Figure #10**, eight of the LDCs ended 2013 within four leaks, plus or minus, of where they finished 2012. NGrid NY, NGrid LI, and Central Hudson saw the most

<sup>8</sup>A backlog of leaks requiring repair 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; and Type 2: monitored every two months and repaired within one year.

significant change compared to 2012, going from 25 to 7, 25 to 10, and 14 to 4, respectively.

Once again, and now five of the past six years, NFG has been identified as a significant outlier. In its response to the 2012 Performance Measures Report, NFG disagreed with this characterization and stated it believes it is one of the top five performers in the state. NFG pointed out that it had 14% of the potentially hazardous leak repairs in 2012, yet has 20% of the total main miles and 18% of the leak-prone miles. When normalizing this data per mile of main, NFG's leakage rate is actually below the statewide average. It also points out again that the leaks counted in this measure do not present an immediate hazard to the public and are targeted for repair during the upcoming year and within the required timeframes. NFG states it strongly believes that it has operated in a manner that ensures the highest level of safety, and points out that these leaks are subjected to increased frequencies of surveillances during frost conditions. Staff disagrees with NFG's position, in that, the company has over 50% of the total leaks in the statewide backlog, but does not have anywhere near 50% of the State's leak prone pipe inventory. Based on the Commission's continued emphasis on this measure, NFG committed to achieve a lower repairable leak backlog due to Staff's continued emphasis on improvement within this measure. The company ended 2013 with one fewer leak (58 to 57) compared to the 2012 data. The company repaired 248 less of these types of leaks in 2013 compared to 2012.

Other LDCs in the state are in similar positions with leak prone pipe and still strive to enter the frost season with a low backlog of potentially hazardous leaks. Staff believes entering the frost season with the lowest possible backlog is the best approach to minimizing the risk to the public. It is

recommended that NFG respond to this report outlining efforts it will make to further decrease its year-end leak backlog.

### Conclusion

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

Over the past eleven years LDCs have collectively worked to improve performance in the key areas of safety identified in this report. There has been a 70.6% improvement in total damage performance, the 30-minute emergency response time has improved from 76.8% to 83.2%, and the year-end leak backlog of potentially hazardous leaks has decreased 90.6%, from 1,154 to 108. As LDCs continue their outreach efforts, adopt better practices in responding to leak and odor calls, and work to replace aging leak prone infrastructure, Staff expects further improvement will occur.

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

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

In addition, Staff is considering including two additional performance measures in future reports: (1) non-compliances identified during Staff's record and field audits for safety code compliance; and (2) total leak backlog. Staff has been reporting on the backlog of leaks that require repair pursuant to 16 NYCRR Part 255 (Type 1, 2 and 2A). The new measure would include Type 3 leaks, which require reevaluation during the next required leakage survey or annually, whichever is less, but no mandatory repair timeframe.



**Recommendations**

For each of the measures listed below, it is recommended that the LDCs identified self-assess their performance. Staff will send letters to these LDCs requesting responses within 45 days. The identified LDCs should take into consideration the analyses and recommendations in this report, the effectiveness of efforts made in response to previous performance measure reports, and respond with improved actions plans identifying their self-assessment and outlining incremental efforts on how they will improve in the future.

Mismark Damages:

- Con Edison, and Corning

No-Call Damages:

- Con Edison, Corning, NGrid NY, and NGrid Upstate

Company & Company Contractor Error Damages:

- Central Hudson, NGrid LI, NGrid NY, and NGrid Upstate

Excavator Error Damages:

- NFG, NGrid NY, NGrid Upstate, O&R, RG&E, and St. Lawrence

Emergency Response Time:

- St. Lawrence

Leak Management:

- NFG

**Appendix A**

## Number of One-call Tickets

LDCs	2009	2010	2011	2012	2013
Con Edison	140,170	158,596	159,355	166,749	177,102
Central Hudson	18,670	19,568	18,206	20,714	21,305
Corning	4,380	4,143	4,735	4,794	4,386
NGrid LI	149,860	132,813	134,852	139,274	188,412
NGrid NY	94,117	94,573	95,974	109,298	125,030
NFG	91,786	88,512	89,292	87,916	88,621
NGrid Upstate	85,165	82,850	83,091	88,109	86,500
NYSEG	56,134	60,469	61,757	65,086	56,039
O&R	23,690	23,225	24,315	25,130	25,193
RG&E	52,313	61,332	60,168	60,579	56,232
St. Lawrence	3,190	2,986	3,296	4,100	4,021

## Number of Damages due to Mismarks

LDCs	2009	2010	2011	2012	2013
Con Edison	51	53	60	26	38
Central Hudson	5	9	6	6	6
Corning	0	0	0	1	4
NGrid LI	85	82	75	102	75
NGrid NY	60	38	52	49	50
NFG	79	54	48	50	40
NGrid Upstate	64	70	40	34	30
NYSEG	20	22	21	28	25
O&R	10	12	10	16	14
RG&E	17	22	19	24	19
St. Lawrence	0	1	2	1	1

## Damages due to Mismarks per 1,000 Tickets

LDCs	2009	2010	2011	2012	2013
Con Edison	0.36	0.33	0.38	0.16	0.21
Central Hudson	0.27	0.46	0.33	0.29	0.28
Corning	0.00	0.00	0.00	0.21	0.91
NGrid LI	0.57	0.62	0.56	0.73	0.40
NGrid NY	0.64	0.40	0.54	0.45	0.40
NFG	0.86	0.61	0.54	0.57	0.45
NGrid Upstate	0.75	0.84	0.48	0.39	0.35
NYSEG	0.36	0.36	0.34	0.43	0.47
O&R	0.42	0.52	0.41	0.64	0.56
RG&E	0.32	0.36	0.32	0.40	0.34
St. Lawrence	0.00	0.33	0.61	0.24	0.25

**Appendix A (Continued)**

## Number of Damages due to No-calls

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	41	44	42	32	46
Central Hudson	14	8	14	12	12
Corning	0	4	1	2	7
NGrid LI	100	105	103	101	137
NGrid NY	49	42	30	35	51
NFG	71	69	60	60	43
NGrid Upstate	51	46	33	33	44
NYSEG	19	12	18	15	10
O&R	28	15	14	18	16
RG&E	15	20	28	21	16
St. Lawrence	0	2	1	1	0

## Damages due to No-calls per 1,000 Tickets

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	0.29	0.28	0.26	0.19	0.26
Central Hudson	0.75	0.41	0.77	0.58	0.56
Corning	0.00	0.97	0.21	0.42	1.60
NGrid LI	0.67	0.79	0.76	0.73	0.73
NGrid NY	0.52	0.44	0.31	0.32	0.41
NFG	0.77	0.78	0.67	0.68	0.49
NGrid Upstate	0.60	0.56	0.40	0.37	0.51
NYSEG	0.34	0.20	0.29	0.23	0.18
O&R	1.18	0.65	0.58	0.72	0.64
RG&E	0.29	0.33	0.47	0.35	0.28
St. Lawrence	0.00	0.70	0.30	0.24	0.00

## Number of Damages due to Excavator Error

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	92	97	73	69	54
Central Hudson	15	14	13	21	11
Corning	9	5	14	12	7
NGrid LI	119	150	130	115	148
NGrid NY	110	93	120	98	138
NFG	176	162	145	131	138
NGrid Upstate	224	183	174	185	166
NYSEG	57	68	57	67	54
O&R	27	38	25	34	43
RG&E	66	46	63	59	66
St. Lawrence	21	4	6	12	16

**Appendix A (Continued)**

Damages due to Excavator Error per 1,000 Tickets

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	0.66	0.61	0.46	0.41	0.30
Central Hudson	0.80	0.72	0.71	1.01	0.52
Corning	2.05	1.21	2.96	2.50	1.60
NGrid LI	0.79	1.13	0.96	0.83	0.79
NGrid NY	1.17	0.98	1.25	0.90	1.10
NFG	1.92	1.83	1.62	1.49	1.56
NGrid Upstate	2.63	2.21	2.09	2.10	1.92
NYSEG	1.02	1.12	0.92	1.03	0.96
O&R	1.14	1.64	1.03	1.35	1.71
RG&E	1.26	0.75	1.05	0.97	1.17
St. Lawrence	6.58	1.34	1.82	2.93	3.98

Number of Damages due to Co. &amp; Co. Contractor Error

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	34	31	35	33	23
Central Hudson	9	4	2	5	7
Corning	4	3	0	1	1
NGrid LI	3	3	5	1	4
NGrid NY	4	7	3	5	7
NFG	2	5	3	4	3
NGrid Upstate	6	7	5	4	8
NYSEG	1	3	4	10	2
O&R	8	6	12	10	9
RG&E	4	7	5	8	6
St. Lawrence	1	0	0	0	0

Damages due to Co. &amp; Co. Contractor Error per 1,000 Tickets

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	0.24	0.20	0.22	0.20	0.13
Central Hudson	0.48	0.20	0.11	0.24	0.33
Corning	0.91	0.72	0.00	0.21	0.23
NGrid LI	0.02	0.02	0.04	0.01	0.02
NGrid NY	0.04	0.07	0.03	0.05	0.06
NFG	0.02	0.06	0.03	0.05	0.03
NGrid Upstate	0.07	0.08	0.06	0.05	0.09
NYSEG	0.02	0.05	0.06	0.15	0.04
O&R	0.34	0.26	0.49	0.40	0.36
RG&E	0.08	0.11	0.08	0.13	0.11
St. Lawrence	0.31	0.00	0.00	0.00	0.00

**Appendix A (Continued)**

## Number of Total Damages

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	218	225	210	160	161
Central Hudson	43	35	35	44	36
Corning	13	12	15	16	19
NGrid LI	307	340	313	319	364
NGrid NY	223	180	205	187	246
NFG	328	290	256	245	224
NGrid Upstate	345	306	252	256	248
NYSEG	97	105	100	120	91
O&R	73	71	61	78	82
RG&E	102	95	115	112	107
St. Lawrence	22	7	9	14	17

## Total Damages per 1,000 Tickets

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	1.56	1.42	1.32	0.96	0.91
Central Hudson	2.30	1.79	1.92	2.12	1.69
Corning	2.97	2.90	3.17	3.34	4.33
NGrid LI	2.05	2.56	2.32	2.29	1.93
NGrid NY	2.37	1.90	2.14	1.71	1.97
NFG	3.57	3.28	2.87	2.79	2.53
NGrid Upstate	4.05	3.69	3.03	2.91	2.87
NYSEG	1.73	1.74	1.62	1.84	1.62
O&R	3.08	3.06	2.51	3.10	3.25
RG&E	1.95	1.55	1.91	1.85	1.90
St. Lawrence	6.90	2.34	2.73	3.41	4.23

**Appendix B<sup>9</sup>**

<b>Con Edison</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	140,170	158,596	159,355	166,749	177,102	832,841
Mismarks	0.36	0.33	0.38	0.16	0.21	0.36
No-Calls	0.29	0.28	0.26	0.19	0.26	0.46
Excavator Error	0.66	0.61	0.46	0.41	0.30	1.01
Co. & Co. Contractor Error	0.24	0.20	0.22	0.20	0.13	0.08
Total	1.56	1.42	1.32	0.96	0.91	1.92

<b>Central Hudson</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	18,670	19,568	18,206	20,714	21,305	832,841
Mismarks	0.27	0.46	0.33	0.29	0.28	0.36
No-Calls	0.75	0.41	0.77	0.58	0.56	0.46
Excavator Error	0.80	0.72	0.71	1.01	0.52	1.01
Co. & Co. Contractor Error	0.48	0.20	0.11	0.24	0.33	0.08
Total	2.30	1.79	1.92	2.12	1.69	1.92

<b>Corning</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	4,380	4,143	4,735	4,794	4,386	832,841
Mismarks	0.00	0.00	0.00	0.21	0.91	0.36
No-Calls	0.00	0.97	0.21	0.42	1.60	0.46
Excavator Error	2.05	1.21	2.96	2.50	1.60	1.01
Co. & Co. Contractor Error	0.91	0.72	0.00	0.21	0.23	0.08
Total	2.97	2.90	3.17	3.34	4.33	1.92

<sup>9</sup> The Total Damage performance may not equal the sum of the four metrics due to rounding.

**Appendix B<sup>9</sup> (Continued)**

<b>NGrid LI</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	149,860	132,813	134,852	139,274	188,412	832,841
Mismarks	0.57	0.62	0.56	0.73	0.40	0.36
No-Calls	0.67	0.79	0.76	0.73	0.73	0.46
Excavator Error	0.79	1.13	0.96	0.83	0.79	1.01
Co. & Co. Contractor Error	0.02	0.02	0.04	0.01	0.02	0.08
Total	2.05	2.56	2.32	2.29	1.93	1.92

<b>NGrid NY</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	94,117	94,573	95,974	109,298	125,030	832,841
Mismarks	0.64	0.40	0.54	0.45	0.40	0.36
No-Calls	0.52	0.44	0.31	0.32	0.41	0.46
Excavator Error	1.17	0.98	1.25	0.90	1.10	1.01
Co. & Co. Contractor Error	0.04	0.07	0.03	0.05	0.06	0.08
Total	2.37	1.90	2.14	1.71	1.97	1.92

<b>NFG</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	91,786	88,512	89,292	87,916	88,621	832,841
Mismarks	0.86	0.61	0.54	0.57	0.45	0.36
No-Calls	0.77	0.78	0.67	0.68	0.49	0.46
Excavator Error	1.92	1.83	1.62	1.49	1.56	1.01
Co. & Co. Contractor Error	0.02	0.06	0.03	0.05	0.03	0.08
Total	3.57	3.28	2.87	2.79	2.53	1.92

**Appendix B<sup>9</sup> (Continued)**

<b>NGrid Upstate</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	85,165	82,850	83,091	88,109	86,500	832,841
Mismarks	0.75	0.84	0.48	0.39	0.35	0.36
No-Calls	0.60	0.56	0.40	0.37	0.51	0.46
Excavator Error	2.63	2.21	2.09	2.10	1.92	1.01
Co. & Co. Contractor Error	0.07	0.08	0.06	0.05	0.09	0.08
Total	4.05	3.69	3.03	2.91	2.87	1.92

<b>NYSEG</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	56,134	60,469	61,757	65,086	56,039	832,841
Mismarks	0.36	0.36	0.34	0.43	0.47	0.36
No-Calls	0.34	0.20	0.29	0.23	0.18	0.46
Excavator Error	1.02	1.12	0.92	1.03	0.96	1.01
Co. & Co. Contractor Error	0.02	0.05	0.06	0.15	0.04	0.08
Total	1.73	1.74	1.62	1.84	1.62	1.92

<b>O&amp;R</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	23,690	23,225	24,315	25,130	25,193	832,841
Mismarks	0.42	0.52	0.41	0.64	0.56	0.36
No-Calls	1.18	0.65	0.58	0.72	0.64	0.46
Excavator Error	1.14	1.64	1.03	1.35	1.71	1.01
Co. & Co. Contractor Error	0.34	0.26	0.49	0.40	0.36	0.08
Total	3.08	3.06	2.51	3.10	3.25	1.92



**Appendix B<sup>9</sup> (Continued)**

<b>RG&amp;E</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	52,313	61,332	60,168	60,579	56,232	832,841
Mismarks	0.32	0.36	0.32	0.40	0.34	0.36
No-Calls	0.29	0.33	0.47	0.35	0.28	0.46
Excavator Error	1.26	0.75	1.05	0.97	1.17	1.01
Co. & Co. Contractor Error	0.08	0.11	0.08	0.13	0.11	0.08
Total	1.95	1.55	1.91	1.85	1.90	1.92

<b>St. Lawrence</b>	2009	2010	2011	2012	2013	<b>Statewide</b>
Number of Tickets	3,190	2,986	3,296	4,100	4,021	832,841
Mismarks	0.00	0.33	0.61	0.24	0.25	0.36
No-Calls	0.00	0.70	0.30	0.24	0.00	0.46
Excavator Error	6.58	1.34	1.82	2.93	3.98	1.01
Co. & Co. Contractor Error	0.31	0.00	0.00	0.00	0.00	0.08
Total	6.90	2.34	2.73	3.41	4.23	1.92

**Appendix C**

Emergency Response Times for 45 Minutes

<b>LDCs</b>	2009	2010	2011	2012	2013
Central Hudson	99.1%	98.9%	98.6%	98.7%	99.1%
Corning	97.1%	96.6%	96.3%	98.2%	97.5%
Con Edison	97.9%	97.9%	98.5%	99.2%	99.4%
NGrid LI	95.7%	95.2%	96.0%	93.0%	94.9%
NGrid NY	96.6%	96.3%	96.1%	95.0%	95.9%
NFG	97.1%	97.7%	97.7%	97.7%	98.0%
NGrid Upstate	95.9%	95.1%	95.0%	95.9%	94.6%
NYSEG	96.1%	95.3%	95.1%	95.1%	95.5%
O&R	97.8%	98.1%	97.8%	98.4%	98.9%
RG&E	98.9%	98.3%	98.6%	97.8%	96.9%
St. Lawrence	96.1%	95.2%	95.5%	95.6%	92.9%

**Appendix C (Continued)**

## Emergency Response Times for 60 Minutes

<b>LDCs</b>	2009	2010	2011	2012	2013
Central Hudson	99.9%	99.9%	99.8%	99.7%	99.9%
Corning	98.7%	99.6%	99.0%	99.8%	99.4%
Con Edison	99.9%	99.9%	99.9%	99.9%	99.9%
NGrid LI	99.7%	99.6%	99.7%	97.4%	99.4%
NGrid NY	99.6%	99.2%	99.3%	98.5%	99.4%
NFG	99.2%	99.4%	99.4%	99.4%	99.5%
NGrid Upstate	98.8%	98.5%	98.4%	98.5%	98.2%
NYSEG	99.3%	99.0%	98.2%	99.0%	99.2%
O&R	99.9%	99.9%	99.9%	99.9%	99.9%
RG&E	99.8%	99.8%	99.8%	99.6%	99.4%
St. Lawrence	99.6%	99.5%	99.8%	99.8%	99.2%

**Appendix D**

## Total Leak Repairs on Mains by Material

<b>LDCs</b>	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast / Wrought Iron	Copper	Other
Con Edison	1747	83	0	0	39	1764	0	0
Central Hudson	53	0	0	54	44	148	0	0
Corning	98	0	5	1	2	0	0	0
NGrid LI	512	124	10	20	55	154	0	0
NGrid NY	107	0	0	66	11	1806	0	0
NFG	1997	0	0	82	162	346	0	10
NGrid Upstate	24	43	0	71	44	369	0	0
NYSEG	102	0	0	34	16	0	0	4
O&R	212	0	0	16	80	15	0	0
RG&E	76	0	0	192	17	18	0	0
St. Lawrence	0	0	0	1	0	0	0	0

**Appendix D (Continued)**

Total Leak Repairs on Services by Material

<b>LDCs</b>	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast / Wrought Iron	Copper	Other
Con Edison	1835	333	0	0	392	0	104	0
Central Hudson	55	0	0	53	39	0	0	0
Corning	40	0	0	1	3	0	0	0
NGrid LI	907	191	28	56	182	0	30	0
NGrid NY	352	0	0	254	191	0	228	0
NFG	525	0	0	68	225	0	0	46
NGrid Upstate	197	137	0	87	155	13	21	0
NYSEG	105	0	0	37	77	0	0	3
O&R	293	0	0	39	147	1	0	0
RG&E	61	0	0	152	69	1	0	12
St. Lawrence	0	0	0	33	25	0	0	0

**Appendix E**

## Backlog of Potentially Hazardous Leaks

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	33	25	11	10	13
Central Hudson	13	12	15	14	4
Corning	7	8	7	6	2
NGrid LI	67	29	21	25	10
NGrid NY	51	17	6	25	7
NFG	68	73	63	58	57
NGrid Upstate	17	1	3	4	0
NYSEG	9	6	6	0	1
O&R	20	8	8	4	0
RG&E	7	9	6	9	10
St. Lawrence	0	0	0	2	4

**Appendix E (Continued)**

## Repaired Potentially Hazardous Leaks

<b>LDCs</b>	2009	2010	2011	2012	2013
Con Edison	6,592	5,993	6,032	5,540	5,267
Central Hudson	175	141	201	211	273
Corning	105	108	129	66	45
NGrid LI	2,325	2,170	2,509	2,331	2,050
NGrid NY	2,351	2,378	3,114	2,287	2,839
NFG	1,464	1,340	1,589	1,995	1,747
NGrid Upstate	1,316	1,354	1,164	778	798
NYSEG	207	266	477	267	210
O&R	339	480	520	422	406
RG&E	330	430	322	195	292
St. Lawrence	5	4	7	52	4