

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE

INTEROFFICE MEMORANDUM

June 5, 2014

TO: THE COMMISSION

FROM: OFFICE OF ELECTRIC, GAS, AND WATER

SUBJECT: CASE 14-E-0092 - 2013 Compliance Report on Stray Voltage Testing and Inspections as Required by the Electric Safety Standards.

RECOMMENDATION: This item is for information only and reports on the status of compliance with the Commission's Electric Safety Standards.

BACKGROUND

On January 5, 2005 the Commission established Electric Safety Standards to safeguard the public from exposure to stray voltage and to identify and eliminate potentially harmful conditions before serious safety hazards and/or reliability deficiencies develop.¹ The Electric Safety Standards include: (1) annual stray voltage testing of electric facilities and streetlights accessible to the public, using certified voltage detection devices; (2) inspection of utility electric facilities on a minimum of a five-year cycle; (3) recordkeeping, certification, quality assurance and reporting requirements; and (4) adoption of the National Electric Safety Code as the minimum standard governing utility construction, maintenance, and operations.

In March 2013, the Commission made several substantive revisions to the Electric Safety Standards. Most notably was the frequency of stray voltage testing on the overhead, transmission, pad mount transformers, and underground residential distribution (URD) was modified. Rather than being required on an annual basis, the Commission required testing on a five year cycle to coincide with the existing inspection cycle

¹ Case 04-M-0159, Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems, Order Instituting Electric Safety Standards (issued January 5, 2005).

requirements. The annual stray voltage testing requirements remain in effect for street lights² and underground facilities across the State. This modification to the Safety Standards resulted from a joint petition filed with the Commission by the New York State utilities identifying the low number of stray voltage findings on these facilities compared to the efforts and expenditures devoted to those testing efforts by the utilities without being warranted by additional safety concerns.

In addition, the requirement for an internal inspection for underground residential distribution (URD) transformers was eliminated. This determination was based on the fact that the efforts to complete an internal inspection on URD transformers provided little to no additional safety benefits over the external visual inspection based on the number of results identified since the Safety Standards were implemented. Both of these modifications to the Safety Standards provide for a more streamlined and efficient testing and inspection program by the utilities, without reducing the level of safety to the people of New York.

Stray voltage testing is generally a manual process performed using handheld devices (manual testing). The Commission also requires that 12 mobile surveys be performed in New York City;³ two mobile surveys be completed in Buffalo; and one each in Yonkers, White Plains, Albany, Niagara Falls, Rochester, and New Rochelle.⁴ In areas served predominantly by underground facilities, it is also acceptable for utilities to

² The term "streetlights" includes streetlights owned by electric utilities and municipalities located on, along, or adjacent to public thoroughfares and areas, and traffic signal poles and devices; it does not include privately-owned fixtures, such as those located in private parking lots.

³ Con Edison completed 12 mobile surveys of its underground network distribution system, which includes areas in Manhattan, the Bronx, Queens, and Brooklyn

⁴ Case 04-M-0159, supra, and Case 06-M-1467, Orange and Rockland Utilities, Inc., Order Adopting Changes to Electric Safety Standards (issued December 15, 2008) and Case 10-E-0271, In the Matter of Examining the Mobile Testing Requirement of the Electric Safety Standards, Order Requiring Additional Mobile Stray Voltage Testing (issued July 21, 2010).

use mobile testing instead of manual testing. Consolidated Edison Company of New York, Inc. (Con Edison), Niagara Mohawk Power Corporation d/b/a National Grid (National Grid), and Rochester Gas and Electric Corporation (RG&E) all utilized mobile testing as a means of compliance and did not perform manual testing in the areas where mobile testing was ordered.

OVERVIEW

Manual stray voltage testing was performed on approximately 1.2 million utility facilities statewide in 2013, with 1,208 stray voltage (V) findings identified. Of the total stray voltage findings, 464 (35%) were at voltage levels of 4.5V or higher.⁵ Findings attributed to streetlights accounted for 366 (79%) of the conditions at voltage levels of 4.5V or higher.

In 2013, there were 206 calls from customers reporting shock incidents that resulted in confirmed cases of stray voltage, constituting a slight increase (6%) from 2012; 68 incidents were caused by problems with utility facilities, and 138 were traced to faulty customer equipment or wiring.

Although the number of findings has been declining over the last several years, stray voltage attributed to streetlights continues to be a major concern, particularly in Con Edison's service territory and in Buffalo. As stated earlier, Con Edison completes 12 mobile surveys in the New York City area on an annual basis. To address this issue in Buffalo, as part of its 2012 rate case filing, National Grid proposed, and has begun to implement, a comprehensive street light program to proactively replace antiquated cable and ductwork that serve the street lighting system throughout the entire city of Buffalo. Staff believes that by addressing the root cause of the problem, this effort by National Grid will result in continued improvement in the rate of findings going forward. The

⁵ As a result of the revision to the lower detection threshold, readings below 4.5V are now considered low voltage in nature.

Company files an annual update plan on these efforts and Staff will continue to monitor and evaluate the effectiveness and efficiency of the program going forward.

The Electric Safety Standards also require that each utility visually inspect⁶ 20% of its electric facilities per year and repair the deficiencies found during the inspection process within appropriate time frames as set forth in the Safety Standards. The standards also require all facilities to be inspected within five years. Calendar year 2013 marked the fourth year of the second five year inspection cycle. Statewide, approximately 21% of the facilities were inspected in 2013, resulting in the identification of 138,973 deficiencies by the investor-owned utilities, of which 11,504 required repairs within one week.

2013 RESULTS

Manual Stray Voltage Testing

Table 1 lists the number of stray voltage findings in 2013 at 1V or above resulting from manual testing by facility type.⁷ Stray voltage testing was performed on approximately 1.2 million transmission and distribution facilities across the State, down from 4 million in 2012.⁸

⁶ An inspection requires a qualified and trained individual to evaluate and examine the entire structure to determine its condition and the potential for it to cause or lead to safety hazards or adversely affect reliability.

⁷ These findings do not include instances of stray voltage discovered by company personnel as part of their routine work or instances found by other means, such as customer reports. This data also does not include instances of stray voltage discovered by mobile detection.

⁸ This nearly 70% reduction in stray voltage testing from previous years reflects the modifications to the scope of stray voltage testing requirements made by the Commission in its March 22, 2013 Order in Case 04-M-0159. Tables 1-11 also include 2012 data for comparison purposes.

Table 1: Stray Voltage Findings from Manual Testing by Facility Type

2013 Test Cycle					
Company	Streetlights	Underground Distribution	Overhead Distribution	Transmission	Total Findings
Con Edison	359	25	21	0	405
National Grid	207	0	59	43	309
NYSEG	20	0	105	198	323
RG&E	7	0	48	83	138
Central Hudson	3	0	17	0	20
Orange & Rockland	0	0	1	0	1
Municipal Electric	0	0	12	0	12
Total	596	25	271	324	1,208
2012 Test Cycle					
Company	Streetlights	Underground Distribution	Overhead Distribution	Transmission	Total Findings
Con Edison	216	0	4	0	220
National Grid	160	1	200	125	486
NYSEG	16	1	190	451	658
RG&E	8	0	40	120	168
Central Hudson	0	2	339	0	341
Orange & Rockland	0	0	17	1	18
Municipal Electric	0	0	2	0	2
Total	400	4	792	697	1,893

In Table 1, NYSEG's 2013 reported stray voltage findings for its transmission system shows a considerable decline from the previous year. NYSEG attributes the improved numbers to the reduced scope of testing required on its transmission facilities. The Company further states that the majority of the findings in 2013 continue to be small in nature and generally less than 4.5 V.

Overall, the manual stray voltage testing results and findings reported in 2013 were similar to those of 2012, with streetlights remaining as the major problem area, as shown in Table 2. However, based on the historical results and the majority of the findings being below 4.5 volts, Staff is confident that the utilities' efforts going

forward will continue to provide an effective and efficient testing program, without reducing the level of safety.

Table 2: Stray Voltage Findings from Manual Testing Greater Than 4.5 V

2013 Test Cycle					
Company	Streetlights	Underground Distribution	Overhead Distribution	Transmission	Total Findings
Con Edison	273	15	17	0	305
National Grid	73	0	5	0	78
NYSEG	15	0	22	21	58
RG&E	5	0	2	7	14
Central Hudson	0	0	1	0	1
Orange & Rockland	0	0	1	0	1
Municipal Electric	1	0	6	0	7
Total	367	15	54	28	464
2012 Test Cycle					
Company	Streetlights	Underground Distribution	Overhead Distribution	Transmission	Total Findings
Con Edison	191	9	15	0	215
National Grid	101	0	23	8	132
NYSEG	11	0	28	33	72
RG&E	6	0	2	20	28
Central Hudson	0	0	6	0	6
Orange & Rockland	0	0	6	1	7
Municipal Electric	0	0	2	0	2
Total	309	9	82	62	462

Mobile Stray Voltage Detection Program

Pursuant to the Commission's Order in Case 07-E-0523,⁹ Con Edison has been required to complete 12 system scans on an annual basis. In June 2011, the Commission ordered two surveys in Buffalo and one each in Yonkers, White Plains, Albany, Niagara Falls, Rochester, and New Rochelle. The vast majority of the stray voltage findings are low voltage in nature (1.0-4.4V) and are related to Street Lights/Traffic Signals, followed by Non-Utility Facilities, as was the case in previous years. The results of the scans completed in 2013 are summarized in Tables 3, 4, and 5 below.

Table 3 shows the results from Con Edison's 12 New York City scans. Mobile scans were also completed in its other territories (Yonkers, White Plains, and New Rochelle) required by the Safety Standards in 2013. The rate of findings in New York City and the other areas tested by Con Edison has shown a slight increase from last year's mobile surveys. Staff will closely monitor the Con Edison scans going forward to ensure this uptick in findings is not indicative of a more serious problem.

⁹ Case 07-E-0523, Con Edison - Electric Rates., Order Establishing Rates for Electric Service (issued March 25, 2008).

**Table 3: Findings by Con Edison Utilizing Mobile Detection
Test Cycle (New York City)**

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
2013 Test Cycle					
New York City					
(12 scans)	Underground	398	149	24	571
	Street Lights/Traffic Signals	1,036	477	246	1,759
	Non-Utility Facilities	3,129	1,220	304	4,653
Total		4,563	1,846	574	6,983
2012 Test Cycle					
New York City					
(12 scans)	Underground	212	95	11	318
	Street Lights/Traffic Signals	1,134	466	258	1,858
	Non-Utility Facilities	2,716	1,317	272	4,305
Total		4,062	1,878	541	6,481

In Table 4, the rate of findings with respect to National Grid in the City of Buffalo again identified streetlights as a problem area just as in previous surveys. In a recent dialogue with Staff, National Grid identified numerous contractor line hits as a major contributing factor for the increase in street light findings in 2013.

National Grid implemented a comprehensive street light program in 2012 to replace antiquated standards, lamps, cable and ductwork that serve the street lighting system throughout the city of Buffalo. It is Staff's opinion that this comprehensive street light program will eventually result in improvements in the rate of street light findings, however, overall results will take time culminate. National Grid reported that on circuits where street lights have been rebuilt, no stray voltage was found in 2013. Staff will continue to monitor and evaluate the effectiveness of National Grid's program going forward.

**Table 4: Findings by National Grid Utilizing Mobile Detection -
Test Cycle (Buffalo)**

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
2013 Test Cycle					
Buffalo	Distribution	0	0	0	0
(scan 1)	Underground	0	0	0	0
	Street Lights/Traffic Signals	209	118	9	336
	Non-Utility Facilities	7	2	0	9
	Subtotal	216	120	9	345
Buffalo	Distribution	0	0	0	0
(scan 2)	Underground	0	0	0	0
	Street Lights/Traffic Signals	429	92	5	526
	Non-Utility Facilities	39	4	1	44
	Subtotal	468	96	6	570
Total		684	216	15	915
2012 Test Cycle					
Buffalo	Distribution	0	0	0	0
(scan 1)	Underground	0	0	0	0
	Street Lights/Traffic Signals	220	63	19	302
	Non-Utility Facilities	10	3	1	14
	Subtotal	230	66	20	316
Buffalo	Distribution	0	0	0	0
(scan 2)	Underground	0	0	0	0
	Street Lights/Traffic Signals	184	55	4	243
	Non-Utility Facilities	15	2	0	17
	Subtotal	199	57	4	260
Total		429	123	24	576

As shown in Table 5, the City of Rochester experienced an increase in stray voltage findings from 2012 to 2013. RG&E contends that the vast majorities of the findings were in the 1.0v – 4.4v range and further suggests that this uptick in stray voltage findings is likely attributed to issues last year concerning the City of Rochester’s street light contractor. RG&E states that in many instances, the City’s contractor was not able to effectively verify the detected fault on the facility. This necessitated a re-evaluation of all original detections, and consequently many conditions were excluded from the official total. This effort resulted in many repairs being delayed until the subsequent testing cycle.

In Staff discussions with RG&E concerning its efforts going forward, the Company stated it hired a repair contractor independent of the City to correct any remaining deficiencies prior to the 2014 scan. Staff will monitor these efforts to ensure that mobile stray voltage findings in the City of Rochester are properly and efficiently repaired.

Table 5: Findings by RGE Utilizing Mobile Detection – Test Cycle (City of Rochester)

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
2013 Test Cycle					
Rochester	Distribution	0	0	0	0
	Underground	3	0	0	3
	Street Lights/Traffic Signals	182	32	8	222
	Non-Utility Facilities	13	1	0	14
Total		198	33	8	239
2012 Test Cycle					
Rochester	Distribution	0	0	0	0
	Underground	0	0	0	0
	Street Lights/Traffic Signals	17	4	1	22
	Non-Utility Facilities	0	0	0	0
Total		17	4	1	22

Shock Reports

In addition to testing programs, utilities are made aware of potential stray voltage locations through information provided to them by the public. Utilities are required to respond to and investigate all shock reports, including reports involving domestic animals, regardless of whether or not injuries occurred. Table 6 provides a summary for 2013 of the electric shock reports received by the utilities where investigations yielded actual voltage findings. The table also classifies shock reports based on the source of the stray voltage. Investigations of shock reports where the cause of the stray voltage was determined to be the purview of the utility are classified as

company responsibility. Customer responsibility issues include shock incidents where the cause of the stray voltage was found to be the customer's wiring or equipment.

It should be noted that the number of shock reports attributed to utility facilities has remained relatively flat from last year. National Grid and Con Edison are still reporting the highest number of shock incidents among New York electric utilities. Our analysis continues to indicate that the greater percentage (68%) of reported shock incident calls can be traced to non-utility individuals contacting normally energized equipment while performing maintenance work on their homes or businesses.

Table 6: Summary of Shock Reports

2013			
Company	Shock Reports	Company Responsibility	Customer Responsibility
Con Edison	61	23	38
National Grid	92	25	67
NYSEG	14	5	9
RG&E	7	2	5
Central Hudson	15	5	10
Orange & Rockland	8	3	5
Municipal Electrics	9	5	4
Total	206	68	138
2012			
Company	Shock Reports	Company Responsibility	Customer Responsibility
Con Edison	54	15	39
National Grid	71	29	42
NYSEG	12	6	6
RGE	3	2	1
Central Hudson	22	4	18
Orange & Rockland	22	12	10
Municipal Electrics	1	0	1
Total	185	68	117

Inspections and Repairs of Electric Facilities

The inspection process involves visual inspection of electric facilities to identify any damage or problem that may cause hazardous conditions or reliability concerns. Inspections are performed by a combination of company employees and contractors, all of whom first receive training including instruction on the common grading system used by New York electric utilities to classify facility deficiencies. If an inspection reveals a deficiency, the safety standards require utilities to make all repairs necessary to eliminate the deficiency based upon its severity:

- Level I discoveries must be fixed within one week of discovery,
- Level II discoveries must be fixed within one year of discovery,
- Level III discoveries must be fixed within three years of discovery, and
- Level IV conditions do not require repair but are identified to be monitored.

The Safety Standards also require that the utilities utilize a detailed reporting system that captures deficiencies by equipment type (poles, transformers, and cables), priority level, whether actions have been taken, and the timeliness of the repair activities in relation to the assigned priority level.

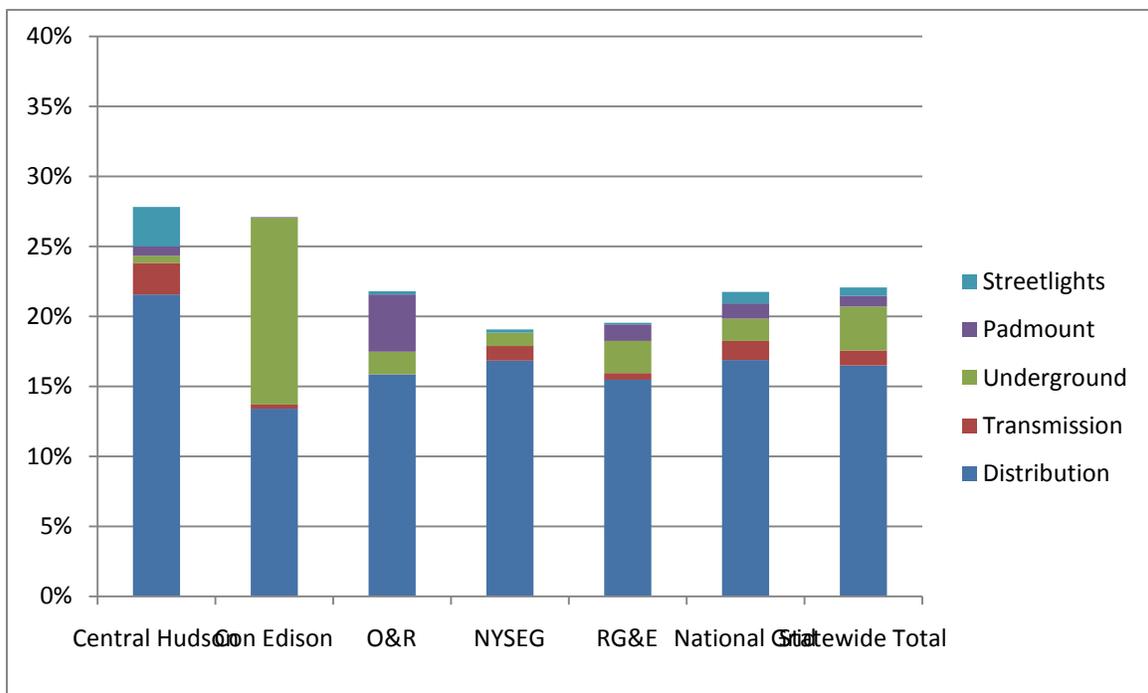
Electric Facility Inspections

The Electric Safety Standards require utilities to complete inspections on 20% of their total facilities each year, so that 100% of a utility's transmission and distribution facilities will be inspected at least once every five years. Statewide, the investor-owned utilities inspected approximately 22% of their electric facilities in 2013. Approximately 620,000 inspections were performed on the overhead distribution systems; the bulk of which were completed by National Grid and NYSEG (approximately 265,000 and 160,000 respectively). Con Edison, Central Hudson, RG&E, and Orange & Rockland completed approximately 74,000, 50,000, 42,000, and 27,000 inspections on their overhead distribution facilities, respectively.

Figure 1 shows the percentage of visual inspections completed for each of the investor-owned utilities by facility type. All utilities, with the exception of NYSEG

and RG&E, met or exceeded the 20% inspection target during the 2013 cycle. NYSEG and RG&E were just short of the target with a final result of 19% and 18%, respectively. All companies have exceeded the 20% annual objective for the fourth year of the five-year cycle, all having surpassed 80% of the total population of assets. It should be noted that Central Hudson has effectively completed a full cycle inspection in the four years ending 2013. This is due to the fact that, prior to 2011, Central Hudson was on a three year full cycle inspection program, and in that year began a transition to a five year cycle as required by the standards. The final steps in realigning the program were completed in 2013, and 2014 will be the first year of the new cycle.

**Figure 1: Percentage of Visual Inspections Completed
Investor-Owned Utilities (Fourth Year of Five-Year Cycle)**

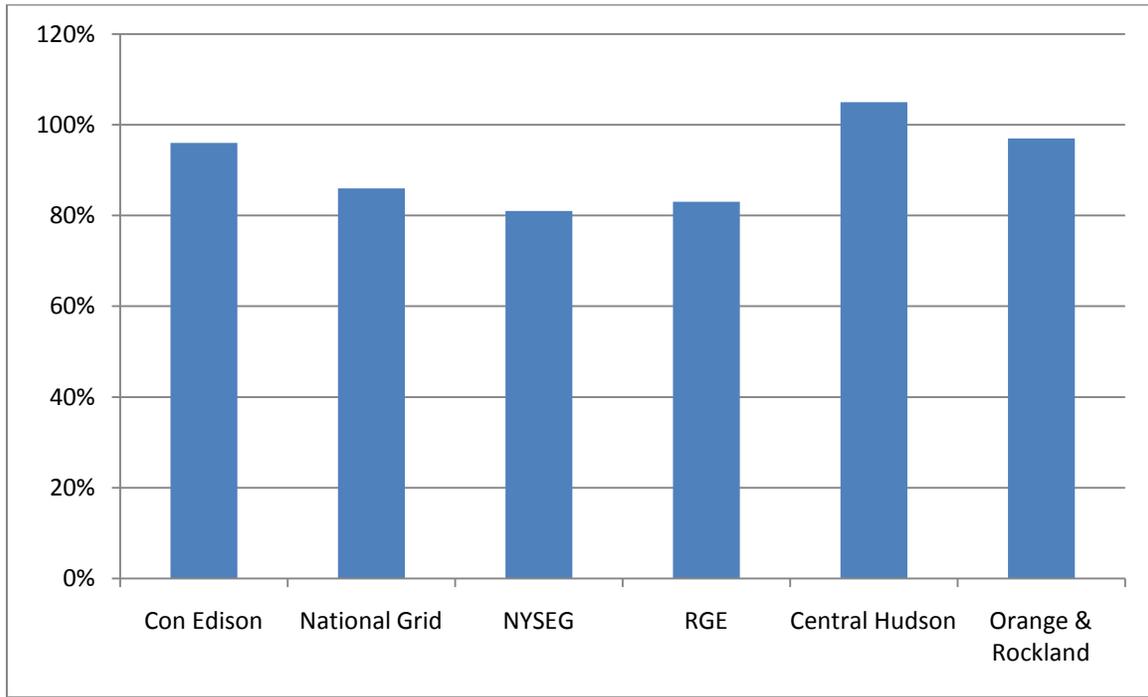


In last year’s report we expressed concern with the performance of Con Edison with respect to completing inspections of their underground facilities. Its efforts in 2013 resulted in a 52% increase in total inspections over 2012. Although the company is still well below expectations on its underground inspection efforts in the context of the five year cycle as a result of Superstorm Sandy, the progress realized in 2013 is a strong

indicator that they will be able to comply with the requirements of the standards. In addition, as a result of delays in inspections attributed to the company’s focus on restoration efforts after Superstorm Sandy, Con Edison was granted a six month extension to complete the inspections. At this time and given their historic performance, all other companies are on target to complete a full inspection of their systems within the five year window.

Looking at the utilities overall inspection completion performance, 2013 was the fourth year of the second five-year inspection cycle, the first of which concluded in 2009. Figure 2 below represents the total percentage of each utility’s assets that have been inspected through 2013. Aside from the underground inspection concerns and modifications identified above with Con Edison, the other utilities have either met or are on track to meet the overall five-year inspection cycle requirement. As shown, Central Hudson has completed its second round of facility inspections as of 2013 and will begin a new cycle starting in 2014.

Figure 2: Percentage of Assets Inspected Through 2013



Electric Facility Inspection Findings

In 2013 inspections were performed on approximately 828,000 facilities across the State. Inspections performed in 2012 totaled approximately 816,000. Table 7 provides a summary of deficiencies for 2012 and 2013 by company and facility type. As shown in the table, the total number of deficiencies discovered declined by approximately 5% from 2012. There were significant decreases in the Distribution and Transmission categories, which were offset by a major increase in Underground deficiencies identified by Con Edison. However, as discussed above, this was a consequence of a concerted effort to address a backlog arising from the effects of Superstorm Sandy in 2012. Taken in total, the results from last year show positive trends in this area.

**Table 7: Deficiencies by Facility Type
Found by Investor Owned Utilities¹⁰**

2013 Inspection Cycle						
Company	Underground	Distribution	Transmission	Pad Mount	Street Lights	Total
Con Edison	76,057	3,284	12	914	0	80,267
National Grid	1,663	38,134	1,810	459	636	42,702
NYSEG	139	8,351	857	118	184	9,649
RG&E	84	1,627	100	42	1	1,854
Central Hudson	17	2,058	28	63	0	2,166
Orange & Rockland	335	1,790	208	2	0	2,335
Total	78,295	55,244	3,015	1,598	821	138,973
2012 Inspection Cycle						
Company	Underground	Distribution	Transmission	Pad Mount	Street Lights	Total
Con Edison	49,615	9,304	126	n/a	n/a	59,045
National Grid	1,934	57,327	3,881	340	547	64,029
NYSEG	549	14,748	799	534	21	16,651
RG&E	109	1,270	86	200	0	1,665
Central Hudson	28	1,568	92	100	0	1,788
Orange & Rockland	17	2,797	98	188	0	3,100
Total	52,252	87,014	5,082	1,362	568	146,278

A further examination of the data in Table 7 indicates a marked decrease in deficiencies attributed to Distribution facilities for National Grid and NYSEG in 2013 as compared with 2012, with the overall tally of deficiencies reverting to historic norms after a spike in 2012 due to the implementation of a new data acquisition system for NYSEG and revisions to the inspection procedures for National Grid.

Table 8 lists the number of deficiencies found in 2013 by severity level and facility type. The table also contains the 2012 information for comparison. In 2013, the

¹⁰ In Table 7, deficiencies for Con Edison's Pad Mount category are included in the totals for Underground facilities.

investor-owned utilities reported finding 11,504 Level I deficiencies. A comparison in this category reveals that Con Edison had was the major contributor of the number of deficiencies found in 2013, in line with previous years. According to Con Edison, the increase in the number of Level I conditions can be largely attributed to weather conditions and a possible misinterpretation of corporate inspection procedures by its contractor. The company is addressing this issue by enhancing its processes through revisions in reporting protocols and providing follow up inspections by its field engineers to confirm proper classification of defects.

**Table 8: Summary of Deficiencies by Severity Level
Found by Investor Owned Utilities**

2013 Inspection Cycle						
Level	Underground	Distribution	Transmission	Pad Mount	Street Lights	Total
I	10,392	594	16	502	0	11,504
II	59,452	22,319	441	749	638	83,599
III	8,451	32,331	2,558	347	183	43,870
Total	78,295	55,244	3,015	1,598	821	138,973
2012 Inspection Cycle						
Level	Underground	Distribution	Transmission	Pad Mount	Street Lights	Total
I	4,467	580	23	261	0	5,331
II	43,060	36,628	756	335	552	81,331
III	4,725	49,806	4,303	766	16	59,616
Total	52,252	87,014	5,082	1,362	568	146,278

The investor-owned utilities identified 83,599 Level II deficiencies in 2013, a slight increase from 2012. There was a significant increase in defects reported in the Underground category by Con Edison, which was offset by a corresponding decrease in the Distribution category for National Grid and NYSEG. An identical scenario holds true for the Level III and Level II deficiencies as just described.

In 2013, with just over 80% of the municipal electrics reporting, the combined total of deficiencies found on municipal systems was 876. Although this is a

significant increase in deficiencies reported from 2012, most of the problems, which were classified as part of the overhead distribution system, were immediately repaired.

Electric Facility Repairs

In general, the utilities maintain an acceptable level of response to Level I deficiencies. In 2013, the utilities reported repairing over 98% of Level I deficiencies; 97% were repaired within the one week time requirement, on par with the historic averages. Under the Commission's Electric Safety Standards, a repair must be considered a permanent repair for it to be removed from the Level I priority list. Remaining Level I deficiencies awaiting repair were made safe.

Statewide, the investor-owned utilities reported repairing 69% of Level II and 13% of Level III deficiencies discovered in 2013. For deficiencies found in 2012, 22% of Level II and 11% of Level III deficiencies were repaired with prescribed timeframes, beginning as of the date of initial discovery. Table 9 lists the number of Level II and Level III repairs completed in 2012 and the number of repairs recorded as outstanding on December 31.

Table 9: Level II/III Repair Activity by Investor Owned Utilities

2013 Deficiency Findings				
Company	Level II		Level III	
	Repaired	Outstanding	Repaired	Outstanding
Con Edison	67,925	12,636	3,063	12,607
National Grid	3,640	17,635	750	20,013
NYSEG	514	1,222	546	7,111
RG&E	104	593	329	779
Central Hudson	40	34	1,562	520
Orange & Rockland	119	87	116	1,375
Total	72,342	32,207	6,366	42,405
2012 Deficiency Findings				
Company	Level II		Level III	
	Repaired	Outstanding	Repaired	Outstanding
Con Edison	3,651	3,025	1,825	11,063
National Grid	6,846	28,518	1,418	26,765
NYSEG	175	2,381	176	13,214
RG&E	206	94	547	793
Central Hudson	52	67	1,001	616
Orange & Rockland	4	890	12	1,988
Total	10,934	34,975	4,979	54,439

National Grid's performance with respect to repairs on Level II and Level III deficiency findings continues to improve from its historic levels. The Company completed repairs on 17% of its Level II conditions and 4% of its Level III conditions in 2013, up from 11% and 3% in 2011. Orange & Rockland realized marked improvement in its repair rates from 2012, managing a rate of 58% for Level II and 8% for Level III repairs, compared to less than 1% for 2012. Con Edison's population of Level II repairs was significantly higher in 2013, driven by a concerted effort to reduce the backlog and the increased rates of findings as noted above.

Overall, we continue to be satisfied with the performance of the utilities, as the number of Not Repaired overdue conditions is small relative to the number of deficiencies identified, as can be seen in Table 10.

Table 10: Overdue Repairs for Investor Owned Utilities

2013 Overdue Repairs		
Company	Level I	
	Repaired	Not Repaired
Con Edison	63	71
National Grid	10	5
NYSEG	40	0
RG&E	7	0
Central Hudson	0	0
Orange & Rockland	4	0
Total	124	76
2012 Overdue Repairs		
Company	Level I	
	Repaired	Not Repaired
Con Edison	222	44
National Grid	2	0
NYSEG	46	6
RG&E	3	1
Central Hudson	0	0
Orange & Rockland	0	0
Total	273	45

Certification and Performance Mechanism

To ensure the utilities maintain the necessary focus on the safety and reliability of their electric systems, the Electric Safety Standards require an officer of each company to annually certify the results of the testing and inspection programs. Each utility provided statements signed by an officer certifying that it performed the requisite number of stray voltage tests and inspections in 2013.

The Electric Safety Standards also establish a performance mechanism to ensure compliance by utilities with the Electric Safety Standards. This mechanism includes two annual performance targets, one for stray voltage testing and one for facility inspections. Given the safety concerns associated with stray voltage, 100% of all company facilities must be tested. The facility inspection target is set at 95% of the

annual requirement. The performance mechanism does require all facilities to be inspected by the end of the fifth year of the cycle. Failure to meet a performance target will result in a negative 75 basis point revenue adjustment (total adjustments of 150 basis point maximum for failure to achieve both performance targets in one year). The 2013 performance results are summarized in Table 11 below. All utilities achieved the target levels prescribed, and as a result no revenue adjustments are applicable.

Table 11: Statewide Stray Voltage and Facility Inspection Target and Actual Performance

Company	Stray Voltage		Inspections	
	Target	Actual	Target	Actual
Con Edison	20%	22%	19%	27%
National Grid	20%	27%	19%	22%
NYSEG	20%	40%	19%	19%
RG&E	20%	50%	19%	20%
Central Hudson	20%	23%	19%	28%
Orange & Rockland	20%	23%	19%	22%

Compliance Monitoring

To ensure proper compliance with the Electric Safety Standards, Staff has maintained frequent contact with all the utilities, individually and collectively, over the past seven years. In early 2005, the investor-owned utilities formed a working group which meets quarterly to discuss issues related to stray voltage testing. The working group has proven to be an effective means to raise and resolve issues, identify best working practices, and establish a common understanding of the extent of stray voltage across the State. Discussions have evolved from addressing implementation issues, such as data collection, to focusing more on stray voltage mitigation efforts, alternative testing equipment, and repair activities. Staff actively participates in the working group sessions. These sessions have helped the utilities maintain an overall understanding of Staff's expectations and identify best working practices.

Staff also monitors the utilities' compliance with the Electric Safety Standard through field visits. The primary purpose of the field visits is to ensure that

stray voltage testing, inspections, and the quality assurance programs are being completed properly. Specifically, Staff verifies that utilities locate and test required facilities for stray voltage. The field visits also enable Staff to monitor the companies' quality assurance programs, and afford Staff the opportunity to randomly sample the utility's testing and inspection records to verify the accuracy of data collected by the utilities.

To further verify the accuracy of utility inspections, Staff also obtains inspection and Quality Assurance/Quality Control (QA/QC) data from the utility and performs a side-by-side comparison of the utility's results with data collected during Staff's inspections. Staff follows up with the utilities by notifying them of any conditions which are noted in Staff's results, but not shown on utility data. The utility is then expected to appropriately reconcile the discrepancy, with Staff's continuing oversight.

CONCLUSION

All of the utilities are in compliance with the testing requirements of the Electric Safety Standards. In 2013, stray voltage testing was performed on approximately 1.2 million facilities across the State. The utilities are also in compliance with the inspection requirement for the fourth year of the second cycle; in total approximately 828,000 facilities were visually inspected in 2013. Since all of the requirements were met, no revenue adjustments should be imposed by the Commission.

The Electric Safety Standards have resulted in the identification of locations with stray voltage levels where mitigation was necessary to maintain public safety. The Standards are an effective means to ensure the safe and reliable operation of the electric system. Yet, stray voltage attributable to streetlights continues to be a major concern. Based on the results observed to date, stray voltage testing should be continued for these facilities to identify potentially unsafe conditions. Staff also encourages the utilities to continue their development of programs focused on known areas of concern, such as streetlights.

The inspection requirements have also identified numerous substandard conditions on electric facilities across the State. The majority of the serious deficiencies found in 2012 and 2013 have been permanently repaired. Overall, Staff is satisfied with the effort put forth by the utilities in repairing deficiencies. Repair efforts on Level II and Level III deficiencies will continue to be monitored to ensure repairs are made within the designated timeframes.

Respectfully submitted,

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