STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE

May 31, 2012

TO: THE COMMISSION

FROM: OFFICE OF ELECTRIC, GAS, AND WATER

SUBJECT: Case 12-E-0198 – 2011 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.

SUMMARY

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] To accomplish this goal, electric utilities are required to annually test all of their publicly-accessible electric facilities for stray voltage and to inspect all of their electric facilities at least once every five years. The utilities are also required to annually test streetlights[2] along public thoroughfares for stray voltage, regardless of ownership. 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

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[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).

[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.

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 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 (RGE) all utilized mobile testing as a means of compliance and did not perform manual testing in the areas where mobile testing was ordered.

Manual stray voltage testing was performed on approximately 4 million utility facilities statewide in 2011, with 1837 stray voltage findings identified. Of the total stray voltage findings, 480 (26%) were at voltage levels of 4.5 V or higher.[5] Findings on streetlights accounted for 316 (67%) of the conditions at voltage levels of 4.5 V or higher.

In 2011, there were 256 calls from customers reporting shock incidents that resulted in confirmed cases of stray voltage; 90 were caused by problems with utility facilities and 166 were traced to faulty customer equipment or wiring.

Although the number of findings has been declining over the last several years, stray voltage on streetlights continues to be a major concern, particularly in Con Edison's service territory and in Buffalo. To address this issue in Buffalo, National Grid has embarked on an aggressive program to proactively replace antiquated cable and ductwork that serve the street lighting system in the city. By addressing what constitutes

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[3] Con Edison completed twelve 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).

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

the root cause of the problem, Staff believes that this effort will result in continued improvement in the rate of findings going forward.

The Electric Safety Standards also require that each utility visually inspect[6] 20% of its electric facilities per year and repair the deficiencies found during the inspection process within appropriate time frames. The standards also require all facilities to be inspected within 5 years. Calendar year 2011 marked the second year of the second five year inspection cycle. Statewide, approximately 22% of the facilities were inspected in 2011, resulting in the identification of 93,189 deficiencies by the investor-owned utilities, of which 16,971 required repairs within one week. The vast majority of the deficiencies requiring repair within one week continue to be driven by Con Edison, specifically in two categories: Improperly Sealed Cable Ends and Unsealed Ducts. These defects are not imminently dangerous and are unlikely to result in an unsafe condition within one year and could reasonably be classified as Level II. In classifying these categories as a Level I deficiency, Con Edison has taken an extremely conservative position while leveraging the efficiencies of affecting repairs at the time of discovery. All of these deficiencies were made safe immediately and 96% have been permanently repaired. A total of 37,865 deficiencies were found that must be fixed within one year; 22% have been repaired and the remainder have been placed into work order systems for tracking and repair. Deficiencies that must be fixed within three years totaled 38,332; 11% have been repaired and 89% have been entered into work order systems. Since repair timeframes begin at the date of initial discovery the utilities still have time to make noncritical repairs before they are considered overdue. The utilities reported repairing 92% of deficiencies found in 2010 requiring repairs within one year and approximately 38% of those requiring repairs by 2013.

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[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. Unlike stray voltage testing, this task requires opening access covers and entering underground facilities, such as manholes.

BACKGROUND

On January 5, 2005, the Commission adopted Electric Safety Standards that established proactive steps to ensure the safety of the public from stray voltage and the reliability of the electric system in the State of New York. 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 December 2008, the Commission adopted several revisions to the Safety Standards. The major changes with respect to stray voltage testing involved the addition of a definition of a stray voltage finding,[7] along with a requirement to mitigate all such findings, enhanced testing protocols for locations where voltage findings are encountered, and a revision from 8 V to 6 V as the lower threshold of the range for stray voltage testing equipment. Additionally, the 2008 Order amended requirements for utility inspections to include a common grading system for rating substandard conditions during facility inspections with defined repair guidelines.

In 2008, Con Edison filed a formal petition with the Commission seeking approval to use mobile detection in lieu of manual testing to comply with the testing requirements of the Electric Safety Standards in areas where the mobile testing can be performed. As part of the revisions to the Electric Safety Standards mentioned above, mobile testing was permitted as an alternative means of compliance.

[7] Any confirmed voltage reading on an electric facility or streetlight greater than or equal to 1V measured using a volt meter and a 500 ohm shunt resistor.

STRAY VOLTAGE TESTING

Table 1 lists the number of stray voltage findings of 1 V or above in 2011 resulting from manual testing, by facility type.[8] Stray voltage testing was performed on approximately 4 million transmission and distribution facilities across the State. The table also contains the 2010 data for comparison.

Table 1: Stray Voltage Findings from Manual Testing by Facility Type[9]

2011 Test Cycle					
Company	**Streetlights**	**Underground Distribution**	**Overhead Distribution**	**Transmission**	**Total Findings**
Con Edison	265	21	18	0	304
National Grid	175	5	263	116	559
NYSEG	33	0	199	61	293
RGE	4	0	26	99	129
Central Hudson	6	8	483	0	497
Orange & Rockland	3	1	20	0	24
Municipal Electric Companies	0	0	32	0	32
Total	486	34	1,041	276	1,837
2010 Test Cycle					
Company	**Streetlights**	**Underground Distribution**	**Overhead Distribution**	**Transmission**	**Total Findings**
Con Edison	350	16	19	3	388
National Grid	208	1	149	18	376
NYSEG	24	3	222	161	410
RGE	14	0	31	133	178
Central Hudson	6	5	283	5	299
Orange & Rockland	3	2	14	0	19
Municipal Electric Companies	23	8	33	0	64
Total	628	35	751	320	1,734

[8] 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.

[9] In Tables 1 and 2, Overhead Distribution includes substation facilities, and Transmission includes both overhead and underground facilities.

In 2011, stray voltage findings were found on 0.05% of total utility facilities tested. Individual detection rates for streetlights, underground distribution, overhead distribution, and transmission are 0.1%, 0.0008%, 0.022%, and 0.007%, respectively.

The rate of findings increased slightly from 2010 to 2011, and National Grid and Central Hudson both experienced an increase in findings on Overhead Distribution. Further analysis of the data, however, indicates that the driver for the increase was a spike in the number of low voltage findings, those less than 4.5 V. Table 2 supports these findings by showing a reduction in those incidents found with greater than 4.5 V.

Table 2: Stray Voltage Findings from Manual Testing Greater Than 4.5 V[9]

2011 Test Cycle					
Company	**Streetlights**	**Underground Distribution**	**Overhead Distribution**	**Transmission**	**Total Findings**
Con Edison	192	14	13	0	219
National Grid	88	0	32	9	129
NYSEG	29	0	40	4	73
RGE	2	0	4	15	21
Central Hudson	3	1	17	0	21
Orange & Rockland	2	0	10	0	12
Municipal Electric Companies	0	0	5	0	5
Total	316	15	121	28	480
2010 Test Cycle					
Company	**Streetlights**	**Underground Distribution**	**Overhead Distribution**	**Transmission**	**Total Findings**
Con Edison	257	11	10	5	283
National Grid	121	0	29	3	153
NYSEG	20	0	42	16	78
RGE	12	1	1	44	58
Central Hudson	5	1	9	1	16
Orange & Rockland	3	1	3	0	7
Municipal Electric Companies	0	0	4	0	4
Total	418	14	102	69	603

Mobile Detection Program

Since the Commission order in Case 07-M-0523,[10] Con Edison has been required to complete 12 system scans on an annual basis. In June of 2011, the Commission ordered two surveys completed in Buffalo and one each in Yonkers, White Plains, Albany, Niagara Falls, Rochester, and New Rochelle. The results of the scans completed in 2011 are summarized in Tables 3, 4, and 5 below.

As in previous years, the vast majority of the findings is low voltage in nature (1.0-4.4V) and attributed to Street Lights/Traffic Signals, followed by Non-Utility Facilities. With respect to National Grid in the City of Buffalo, identified as a problem area in previous surveys, the rate of findings continues a steady decline from the initial survey in 2009. The City of Rochester experienced a significant increase from 2010 to 2011, which can be ascribed to the fact that RGE employed a different contractor utilizing a newer technology in 2010. After analyzing the results from that year, RGE was not satisfied with the performance of the equipment and re-engaged its vendor from 2009 to complete the 2011 survey.

[10] Consolidated Edison Company of New York, Inc., Order Establishing Rates for Electric Service (issued March 25, 2008).

Table 3: Findings by Con Edison Utilizing Mobile Detection - 2011 Test Cycle (New Rochelle, White Plains, Yonkers, and New York City)

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
New Rochelle	Distribution	0	0	0	0
	Underground	1	0	0	1
	Street Lights/Traffic Signals	3	9	0	12
	Non-Utility Facilities	11	3	0	14
	Subtotal	15	12	0	27
White Plains	Distribution	0	0	0	0
	Underground	3	0	0	3
	Street Lights/Traffic Signals	13	8	4	25
	Non-Utility Facilities	23	1	0	24
	Subtotal	39	9	4	52
Yonkers	Distribution	0	0	0	0
	Underground	2	1	0	3
	Street Lights/Traffic Signals	22	2	5	29
	Non-Utility Facilities	18	4	1	23
	Subtotal	42	7	6	55
New York City	Distribution	6	1	0	7
(12 scans)	Underground	311	113	26	450
	Street Lights/Traffic Signals	1,333	585	320	2,238
	Non-Utility Facilities	3,573	1,545	368	5,486
	Subtotal	5,223	2,244	714	8,181
Total		5,319	2,272	724	8,315

Table 4: Findings by National Grid Utilizing Mobile Detection - 2011 Test Cycle (Albany, Niagara Falls, and Buffalo)

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
Albany	Distribution	0	0	0	0
	Underground	0	0	0	0
	Street Lights/Traffic Signals	96	38	3	137
	Non-Utility Facilities	8	2	1	11
	Subtotal	104	40	4	148
Niagara Falls	Distribution	0	0	0	0
	Underground	0	0	0	0
	Street Lights/Traffic Signals	43	4	0	47
	Non-Utility Facilities	0	0	0	0
	Subtotal	43	4	0	47
Buffalo	Distribution	0	0	0	0
(scan 1)	Underground	0	0	0	0
	Street Lights/Traffic Signals	556	118	12	686
	Non-Utility Facilities	17	6	5	28
	Subtotal	573	124	17	714
Buffalo	Distribution	0	0	0	0
(scan 2)	Underground	0	0	0	0
	Street Lights/Traffic Signals	463	80	7	550
	Non-Utility Facilities	12	3	1	16
	Subtotal	475	83	8	566
Total		1,195	251	29	1,475

Table 5: Findings by RGE Utilizing Mobile Detection - 2011 Test Cycle (Rochester)

City	Facility	1.0-4.4V	4.5-24.9V	>25V	Total
Rochester	Distribution	0	0	0	0
	Underground	1	3	0	4
	Street Lights/Traffic Signals	304	25	9	338
	Non-Utility Facilities	17	11	1	29
Total		322	39	10	37

SHOCK REPORTS

In addition to testing programs, the utilities are made aware of potential stray voltage locations from reports by the public. Utilities are required to respond to and investigate all shock reports received, including reports involving domestic animals, and regardless of whether or not injuries are involved. Table 6 provides a summary for 2011 and 2010 of the electric shock reports received by the utilities where investigation yielded actual voltage findings. The table also classifies the shock reports based on the source of the stray voltage. Investigations of shock reports where the cause of the voltage was determined to be the responsibility of the utility are classified as company responsibility. Customer responsibility issues include shock incidents that are caused by non-utility facilities or the improper use of customer-owned equipment.

Shock reports attributed to utility facilities have remained relatively flat over the last several years, ranging from a low of 74 in 2009 to a high of 93 in 2008 with National Grid and Con Edison reporting the highest number of shock incidents. Analysis indicates that many of these calls can be traced to individuals contacting normally energized equipment while performing maintenance work on homes or businesses.

Table 6: Summary of Shock Reports

2011			
Company	**Shock Reports**	**Company Responsibility**	**Customer Responsibility**
Con Edison	79	27	52
National Grid	119	41	78
NYSEG	25	10	15
RGE	3	0	3
Central Hudson	18	5	13
Orange & Rockland	10	7	3
Municipal Electric Companies	2	0	2
Total	256	90	166
2010			
Company	**Shock Reports**	**Company Responsibility**	**Customer Responsibility**
Con Edison	58	15	43
National Grid	129	49	80
NYSEG	16	5	11
RGE	8	3	5
Central Hudson	23	6	17
Orange & Rockland	9	6	3
Municipal Electric Companies	0	0	0
Total	243	84	159

INSPECTIONS OF ELECTRIC FACILITIES

The inspection process involves visual inspection of electric facilities to identify any damage 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. 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 requires a detailed reporting system that captures deficiencies by equipment type (poles, transformers, cable), priority level, whether actions have been taken, and the timeliness of the repair activities in relation to the assigned priority level.

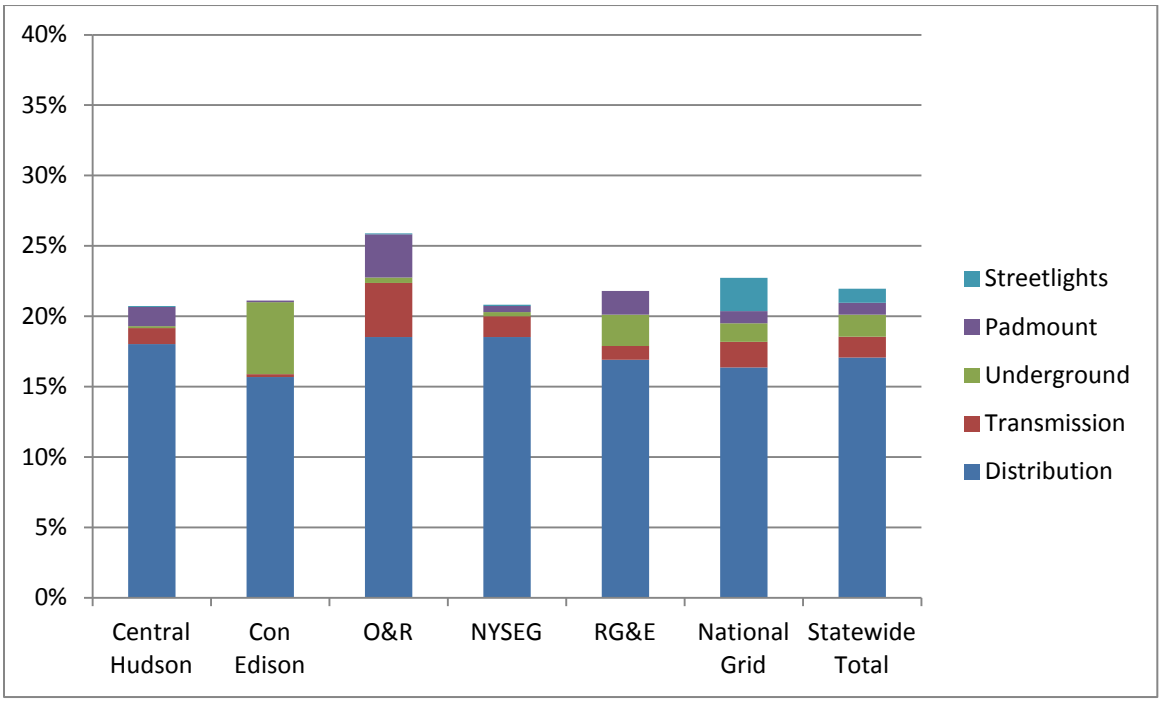
Inspections

The Electric Safety Standards require utilities to complete inspections on 20% of their total facilities in 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 2011. Approximately 627,000 inspections were performed on the overhead distribution system; the bulk of which were completed by National Grid and NYSEG (approximately 246,000 and 173,000 respectively). Con Edison, Central Hudson, RGE, and Orange & Rockland completed approximately 87,000, 42,000, 47,000, and 32,000 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 met or exceeded the 20% inspection target during the 2011 cycle. Central Hudson and Orange & Rockland are well ahead of expectations having completed inspections on 55% and 57% of its facilities after the second full year of the five year cycle.

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



Although statewide the Companies are meeting our overall expectations, we are concerned that the percent of inspections completed on underground distribution facilities for Con Edison continues to be a problem area. In 2011 the company was only able to complete 10% of its underground system, mostly through ad hoc inspections. This is similar to what occurred in the first five year cycle when Con Edison had to accelerate underground inspection activities and associated expenditures in the last two years of the cycle to complete 100% of its facilities within the required five years. This creates an imbalance in the amount spent which needs to be accounted for in the rate making plan for this activity. Given the volume of facilities involved, we will continue to highlight this as an area of concern and will address this with the company going forward and in the next rate case proceeding.

With regard to streetlight inspections, as a follow up from last year's report, National Grid made a concerted effort to improve its performance from 2010. The company completed inspections on 58% of its population and is consequently well ahead of the goal of 20% per year.

Inspection Findings

In 2011 inspections were performed on approximately 806,000 facilities across the State. Inspections performed in 2010 totaled approximately 807,000. Table 7 provides a summary of deficiencies for 2011 and 2010 by company and facility type. As shown in the table, there were across the board reductions realized in all inspection categories, yielding a total decrease of 37%. This trend was manifested most significantly in OH distribution, which accounted for an identical 37% decrease in findings.

Table 7: Deficiencies by Facility Type Found by Investor Owned Utilities[11]

2011 Inspection Cycle						
Company	**Underground**	**Distribution**	**Transmission**	**Pad Mount**	**Street Lights**	**Total**
Con Edison	26,082	8,335	299	n/a	n/a	34,716
National Grid	2,193	43,351	2,938	1,411	733	50,626
NYSEG	15	2,896	662	196	2	3,771
RGE	98	315	77	176	0	666
Central Hudson	14	2,146	70	62	0	2,292
Orange & Rockland	31	703	332	52	0	1,118
Total	28,433	57,746	4,378	1,897	735	93,189
2010 Inspection Cycle						
Company	**Underground**	**Distribution**	**Transmission**	**Pad Mount**	**Street Lights**	**Total**
Con Edison	43,632	14,150	196	990	n/a	58,968
National Grid	2,042	59,767	1,516	1,228	2,315	66,868
NYSEG	116	1,791	859	429	108	3,303
RGE	95	413	71	306	1	886
Central Hudson	20	3,700	195	298	0	4,213
Orange & Rockland	0	12,167	1,808	52	n/a	14,027
Total	45,905	91,988	4,645	3,303	2,424	148,265

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

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

2011 Inspection Cycle						
Level	**Underground**	**Distribution**	**Transmission**	**Pad Mount**	**Street Lights**	**Total**
I	16,204	603	41	122	1	16,971
II	8,509	27,524	561	549	720	37,863
III	3,720	29,619	3,776	1,226	14	38,355
Total	28,433	57,746	4,378	1,897	735	93,189
2010 Inspection Cycle						
Level	**Underground**	**Distribution**	**Transmission**	**Pad Mount**	**Street Lights**	**Total**
I	20,528	716	105	367	2,315	24,031
II	9,449	23,214	513	1,300	108	34,584
III	15,928	68,058	4,027	1,636	1	89,650
Total	45,905	91,988	4,645	3,303	2,424	148,265

Table 8 lists the number of deficiencies found in 2011 by severity level and facility type. The table also contains the 2010 information for comparison. A Level I deficiency is a safety hazard or poses an immediate threat to the delivery of power; Level I deficiencies could include limbs on the primary wire, oil leaks, or the conductor lying directly on a cross arm. In 2011, the investor-owned utilities reported finding 16,971 Level I deficiencies. As discussed earlier, the vast majority of the deficiencies continue to be driven by Con Edison underground facilities, specifically in two categories: Improperly Sealed Cable Ends and Unsealed Ducts. As a result, Staff is in discussions with Con Edison regarding its policy of classifying these conditions as Level I deficiencies since the company has stated that these defects are not imminently dangerous and are unlikely to result in an unsafe condition within one year and could reasonably be classified as Level II.

The investor-owned utilities identified 37,863 Level II deficiencies in 2011, a 10% increase from 2010. Examples of Level II deficiencies include damaged underground covers, damaged cross arms, rotted or seriously damaged poles. As in previous years, the vast majority of the Level II findings were focused in the OH Distribution category, which accounted for most of the increase. Underground and pad

mount facilities accounted for approximately 24% of 2011 Level II deficiencies, as compared to 31% in 2010.

As can be seen from Table 8, the number of Level III deficiencies declined by 57% from 2010. This reduction was driven mainly by a significant drop in deficiencies noted in OH Distribution for Con Edison, National Grid and Orange & Rockland. Staff is reviewing the underlying data to confirm the reasons for the reductions in the deficiencies.

In 2011, the municipal electric companies combined reported a total of 1,422 deficiencies. This is a reduction from the 1,934 reported in 2010, continuing the decline from 2009. All of the deficiencies were classified as part of the overhead distribution system.

Repairs

For an inspection program to be meaningful, the data collected must be used to foster repair activities. Repair activities are based on a grading system that establishes expected timeframes for repairs based on the estimated time that it would take for the equipment to fail, adversely affect public safety, or system reliability. In general, the utilities maintain an acceptable level of response to Level I deficiencies. The repair must be considered a permanent repair to be removed from the Level I priority list. In 2011, the utilities reported repairing 97.6% of Level I deficiencies; 95.6% were repaired within the one week time requirement, an improvement over the 2010 rates of 92.4% and 85.3%, respectively. As discussed below, the remaining Level I deficiencies awaiting repair were made safe.

Statewide, the investor-owned utilities reported repairing 38% of Level II and 11% of Level III deficiencies found in 2010. For deficiencies found in 2011, 22% of Level II and 11% of Level III deficiencies were repaired. As previously mentioned, repair timeframes begin at the date of initial discovery. For example, if a Level III deficiency was found on December 31, 2011, the company would have until December 30, 2014 to complete the repair. As a result, the utilities still have time to make Level II and Level III repairs before they are considered overdue. Table 9 lists the number of

Level II and Level III repairs completed in 2010 and repairs recorded as outstanding on December 31.

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

2011 Deficiency Findings				
	Level II		Level III	
Company	Repaired	Outstanding	Repaired	Outstanding
Con Edison	4,772	2,838	1,973	9,011
National Grid	3,016	25,049	647	21,424
NYSEG	179	1,253	172	1,991
RGE	192	198	123	107
Central Hudson	66	79	1,133	926
Orange & Rockland	22	201	83	742
Total	8,247	29,618	4,131	34,201
2010 Deficiency Findings				
	Level II		Level III	
Company	Repaired	Outstanding	Repaired	Outstanding
Con Edison	9,289	1,121	11,529	16,338
National Grid	6,319	15,112	2,706	40,014
NYSEG	1,093	0	643	970
RGE	441	10	221	137
Central Hudson	185	10	3,104	822
Orange & Rockland	740	41	580	12,287
Total	13,106	21,478	10,087	79,563

National Grid's performance with respect to repairs on Level II and Level III findings, after an improvement in 2010, has slipped again. The company completed repairs on only 11% of its Level II conditions and only 3% of its Level III conditions. This, coupled with the fact that the company has maintained a healthy repair backlog, is cause for concern and we will be monitoring progress in this area. NYSEG's performance in repair of Level II and III deficiencies was disappointing as well, given its historic levels. Staff has requested further details on the company's efforts to address the backlog of repairs and will be tracking the issues going forward.

Table 10: Overdue Repairs for Investor Owned Utilities

2011 Overdue Repairs		
	Level I	
Company	Repaired	Not Repaired
Con Edison	266	444
National Grid	6	0
NYSEG	24	4
RGE	6	1
Central Hudson	1	0
Orange & Rockland	0	0
Total	303	449
2010 Overdue Repairs		
	Level I	
Company	Repaired	Not Repaired
Con Edison	430	154
National Grid	2	0
NYSEG	41	0
RGE	5	0
Central Hudson	0	0
Orange & Rockland	0	0
Total	473	154

Overall, Con Edison's 2010 Level II and Level III repair activity on overhead distribution has been satisfactory. The largest population of open repairs continues to be in the Underground category, particularly with respect to structure damage. The company will need to continue its focus on repairing damaged covers, damaged structures, and secondary cables to complete the required repairs on time. As shown in Table 10, Con Edison's Overdue repairs on Level I deficiencies performance does not meet expectations with 444 Level I repairs not completed, although it should be noted that the majority of the Level I deficiencies are repaired within the required 7 days and all Level I deficiencies are made safe while awaiting permanent repairs. This issue; however, is due to the company's existing practice of identifying damaged underground structures as Level I deficiencies, even though they can't be repaired within the 7 day time frame because of scheduling and actual construction efforts required to fix the

structures. Staff is in discussions with the company to resolve this issue and properly categorize these deficiencies in the future.

As we stated last year, to the extent practical, utilities should develop work packages to perform the repairs in an efficient manner. In addition, accomplishing future repairs activities could be affected by unexpected events such as winter storms. By properly planning for them in advance, the utilities should be able to comply with the Commission's requirements despite experiencing unexpected events during the year.

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 to annually certify the results of the testing and inspection programs. Each of the utilities provided signed statements certifying that it performed the requisite number of stray voltage tests and inspections in 2011.

The Electric Safety Standards also establish a performance mechanism for the utilities to ensure compliance 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, the target is set at 100% of all facilities. The inspection target is set at 95% of the annual requirement. The performance mechanism does require all facilities be inspected by the end of the fifth year of the cycle. Failure to meet a performance target would result in a negative 75 basis point revenue adjustment (total adjustments of 150 basis point maximum). The 2011 performance results are summarized in Table 10 below. All utilities achieved the target levels prescribed, and as a result no revenue adjustments should be imposed.

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

	Stray Voltage		Inspections	
Company	**Target**	**Actual**	**Target**	**Actual**
Con Edison	100%	100%	19%	21%
National Grid	100%	100%	19%	23%
NYSEG	100%	100%	19%	20%
RGE	100%	100%	19%	22%
Central Hudson	100%	100%	19%	20%
Orange & Rockland	100%	100%	19%	30%

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 six years. In early 2005, the investor-owned utilities formed a working group to collectively 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. The discussions have evolved over the years 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, which are held quarterly. These sessions have helped the utilities maintain an overall understanding of Staff's expectations and identify best working practices.

Electric Safety Standard compliance monitoring is also ensured through field visits. The focus of the visits is to ensure that stray voltage testing, inspections, and the quality assurance programs were being completed properly. Specifically, Staff verified that utilities located and tested required facilities for stray voltage. The field visits also monitor the quality assurance programs, which generally include a random sampling by Staff of the utility's testing and inspection records to verify the accuracy of data collected by the utilities.

To verify utility inspection activities Staff performed its own inspections and accompanied the utilities during inspections in certain cases. Staff then obtained

inspection and Quality Assurance/Quality Control (QA/QC) data from the utility and verified the results by performing a side-by-side comparison of the utility's results and data collected during Staff's inspections. Utilities were notified of any conditions which were noted in Staff's results, but not shown on utility data.

REVISIONS TO THE SAFETY STANDARDS

In its annual compliance report, Central Hudson provided a proposal that included revisions to the stray voltage testing cycle for overhead, transmission and pad mounted equipment, changes to the inspection protocol for URD equipment, and recommendations for identifying voltage sources and corresponding mitigation thresholds. The most significant proposal would reduce the annual stray voltage testing requirements for overhead facilities to be in line with the existing five year inspection cycle. For the past year or so Staff has been reviewing the standards with the utilities on a collaborative basis to identify potential revisions to the standards. Any revisions would be based on an analysis of the historical data compiled to date, while simultaneously maintaining a focus on public safety. Staff will continue discussions with the utilities to determine if changes to the Safety Standards are needed going forward.

CONCLUSION

All of the utilities are in compliance with the testing requirements of the Electric Safety Standards. Stray voltage testing was performed on approximately 4 million facilities across the state in 2011. All of the utilities are also in compliance with the inspection requirement for the first year of the second cycle; in total approximately 806,000 facilities were visually inspected in 2011. Since all of the requirements were met, no revenue adjustments should be imposed.

The requirements of 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 remain an effective means to ensure the safe and reliable operation of the electric system. Stray voltage found on streetlights continues to be a major concern. Based on the results observed to date, stray voltage testing is needed to continue on 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 resulted in the identification of numerous substandard conditions on the state's electric facilities. The majority of the serious deficiencies found in 2010 and 2011 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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