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February 15, 2013

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Hon. Jeffrey Cohen
Acting Secretary to the Commission
New York State Public Service Commission
Agency Building 3
Albany, NY 12223-1350

Re: Case 04-M-0159, Proceeding on the Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems

Consolidated Edison Company of New York, Inc.'s *2012 Contact Voltage Test and Facility Inspection Annual Report*

Dear Acting Secretary Cohen:

Consolidated Edison Company of New York, Inc. ("Con Edison") submits herewith for filing its *2012 Contact Voltage Test and Facility Inspection Annual Report* ("Report").

The Report details the results of Con Edison's Contact Voltage Testing Program and Electric Facility Inspection Program for the year ended December 31, 2012 and provides the certification of Con Edison's Vice President that Con Edison has achieved its annual performance targets.

Sincerely,

2012

CONTACT VOLTAGE TEST &

FACILITY INSPECTION

ANNUAL REPORT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

Report on the results of contact voltage tests & facility inspections for the period beginning January 1, 2012 and ending on December 31, 2012.

February 15, 2013

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I. Background

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards ("Safety Standards"), issued on January 5, 2005 in Case 04-M-0159, with subsequent revisions issued on July 21, 2005 and December 15, 2008, require utilities to conduct an annual system-wide contact (stray) voltage detection program and a five-year equipment inspection program to mitigate contact (stray) voltage risks to the public and promote reliability.

The term "stray voltage" is historically associated with neutral-to-earth voltage (NEV) encountered by farm livestock at contact points. Stray voltage is a normally occurring phenomenon that can be found at low levels between two contact points at any property where electricity is grounded.[1] In recent years, the term "contact voltage" has been used to describe voltage resulting from abnormal power system conditions associated with low voltage secondary system faults.

This report describes Consolidated Edison Company of New York, Inc's ("Con Edison" or "the Company") contact voltage detection program and equipment inspection program conducted in 2012.

II. Company Overview

Con Edison is an investor owned utility that provides electric service to approximately 3.2 million customers in a service area of approximately 660 square miles within New York State encompassing New York City, except the Rockaway Peninsula, and most of Westchester County. The Company operates an electric transmission and distribution ("T&D") system that provides a high level of reliability in a very dense urban environment.

- Distribution

    a. *Underground* – The underground system has approximately 278,000 manholes, service boxes, transformer vaults, and above ground pad mounted structures; approximately 24,700 miles of underground duct; and approximately 95,000 miles of underground cable including primary, secondary and service cables. Underground network cables operating at primary voltages of 27 kV and 13.8 kV supply

[1] Electrical systems — both farm systems and utility distribution systems — are grounded to the earth to ensure safety and reliability. Inevitably, some current flows through the earth at each point where the electrical system is grounded and a small voltage develops. This voltage is called neutral-to-earth voltage (NEV). When NEV is found at animal contact points, it is frequently called stray voltage. Stray voltage is this small voltage that is measured between two points that livestock can simultaneously touch. If these points are simultaneously contacted by an animal, a current will flow through the animal. See, http://www.wisconsinpublicservice.com/business/farm_voltage_questions.aspx#whatis

underground transformers that step the primary voltages down to 120/208 distribution voltages that are used by customers.

b. *Overhead* – The overhead system includes: 154 auto loops, **7 -** 4 kV multi-bank substations, 243 – 4 kV unit substations, approximately 288,000 Con Edison owned poles, and approximately 33,400 miles of overhead wires including primary, secondary, and services. Cables operating at primary voltages of 33 kV, 27 kV, 13.8 kV, and 4 kV supply 49,697 overhead transformers that step the primary voltages down to 120/208/240 distribution voltages that are used by customers.

c. *Streetlights* –Con Edison does not own, install, or maintain streetlights and traffic signals within its service territory. The New York City Department of Transportation (NYCDOT) and the local Westchester municipalities primarily own the streetlights and traffic signals in New York City and Westchester County. There are approximately 185,000 metal pole street lights and metal pole traffic signals within Con Edison's service territory.

- Transmission

a. *Underground* – The underground transmission system delivers power at 69 kV, 138 kV, and 345 kV to various switching substations and area substations. The underground system has approximately 1,900 manholes and approximately 796 circuit miles of cable.

b. *Overhead* - The overhead transmission system consists of 138 kV and 345 kV high voltage cable supported on towers and poles on rights-of-way located for the most part, north of New York City and terminating in Westchester County where the underground transmission system begins.

- Substations and Unit Substations

There are 41 transmission substations, 62 area substations, 243 unit substations, and 11 Public Utility Regulating Stations (PURS).

III. Company and Municipally Owned Facilities

Approximately 778,000 individual facilities in Con Edison's service area must be tested for the presence of contact voltage each year. Approximately 588,000 of these facilities must be inspected every five years. These facilities are broken down into the following five categories:

- *Overhead Distribution* – There are approximately 288,000 distribution pole structures that support electric facilities in Con Edison's overhead distribution system. Distribution overhead facilities are included in both the contact voltage and inspection programs. The contact voltage testing criteria include all utility-owned or joint use wooden poles with utility electrical facilities located on public thoroughfares or customer property, including backyards or alleys. Contact voltage tests are performed on all wooden poles with metallic attachments, such as, ground wires, ground rods, anchor guy wires, riser pipes, or any electrical equipment within reach of the general public.

- *Underground T&D and Underground Residential Distribution* – There are approximately 278,000 underground facilities in Con Edison's T&D systems. A subsurface structure is defined as any manhole (MH), service box (SB), transformer vaults (V,VS), transformer manholes (TM), customer boxes (CB), buried boxes (BB), injunction boxes (IJ), P-Boxes (PB), and T-Tap boxes and switchgears specifically associated with Underground Residential Distribution systems ("URD"). These facilities are tested in either the manual and mobile contact voltage testing program and are included in the facility inspection program. The contact voltage testing criteria include all subsurface structures at grade level, including above ground, pad-mounted structures.

- *Street Lights and Traffic Signals* – There are approximately 185,000 metal pole street lights and are traffic signals within Con Edison's service territory. Streetlights and traffic signals are included in the contact voltage testing program only. Area and street lighting that is privately owned is not included in the contact voltage testing program, as per the Safety Standards. Con Edison does not own any metal pole streetlights, and therefore, these structures are not included in the facility inspection program. The contact voltage testing criteria include all municipally owned metal pole streetlights, traffic signals, and pedestrian crosswalk signals located on publicly accessible thoroughfares and areas that are directly supplied by the Company. All contact voltage testing of street lights is performed at night while the fixtures are energized.

- *Substations* – Con Edison operates and maintains substations at 103 locations and PURS substation facilities at 11 locations (some locations contain more than one facility). Con Edison's substations and PURS stations are included in both the contact voltage program and the facility inspection program. The contact voltage testing criteria consist of perimeter fencing and other electrically conductive materials where such materials are accessible to the general public. These materials include but are not limited to fences, doors, roll-up gates, metallic delivery boxes, dielectric fluid delivery ports and Siamese connections.

- *Unit Substations* – Con Edison operates and maintains 243 – 4kV unit substations including 7 – 4kV multi bank substations. Con Edison's 4kV multi-bank and unit stations are included in both the contact voltage program and the facility inspection program. The contact voltage testing criteria consist of perimeter fencing and other electrically conductive materials where such materials are accessible to the general public. These materials include but are not limited to fences, doors, roll-up gates, metallic delivery boxes, and Siamese connections.

- *Overhead Transmission* – Con Edison's overhead transmission system includes 1,212 individual poles or towers. These transmission structures support circuit voltages of 69 kilovolts and greater. Structures that support circuits of lower voltage in addition to the transmission voltage levels are included in this category. All transmission structures are included in both the contact voltage and facility inspection programs. The contact voltage testing criteria include all structures, guys, and down leads attached to these structures.

IV. Contact Voltage Testing Program

The Safety Standards require that Con Edison complete annual contact voltage testing by December 31 each year.

During the annual period ending December 31, 2012, Con Edison tested for contact voltage on all its T&D facilities with publicly accessible components capable of conducting electricity. In addition, Con Edison tested for contact voltage on all municipally owned metallic streetlights and traffic signals that are located on thoroughfares or areas that are publicly accessible and are directly supplied with electricity by the Company.

In addition, and in compliance with the Safety Standards, Con Edison:

- Immediately safeguarded and /or mitigated all voltage findings greater than or equal to 1.0 volt. The Company uses its best efforts to effectuate a permanent repair within 45 days to all Company-owned equipment determined to have caused a voltage finding and remaining necessary to provide our customers with safe and reliable service. The aforesaid permanent repairs not effectuated within 45 days are periodically monitored and tracked to completion. In instances where the contact voltage finding was determined to be caused by equipment that is not owned by Con Edison, the Company, after making the area safe, notified a responsible person associated with the premises of the unsafe condition and the need for the owner to arrange for a permanent repair.

- Tested all publicly accessible structures, streetlights, sidewalks and metal objects within a 30 foot radius of an energized structure, or contact voltage finding greater than or equal to 1.0 volt.

- Responded to, investigated and mitigated positive findings of shock incidents reported by the public.

Training

Con Edison manages its contact voltage testing program and uses both Company field personnel and contractor forces to conduct the testing of utility owned electric facilities and municipal streetlights.

Training for the contact voltage testing program consists of an eight hour class at our training facility for contractor forces as well as on the job training, performed by Supervisors, for Company field forces. The training is based on Company specifications on how to properly test an electric facility for contact voltage. Topics covered in the training are:

> The PSC Safety Standards
> Scope of the contact voltage testing program
> Performing the test and completing the testing form
> Data entry process
> Status of contact voltage testing to annual goal
> Abnormal systems conditions to be reported
> Performance mechanism

Underground Distribution Contact Voltage Testing

Of the total population of approximately 278,000 underground facilities, 160,561 were fielded for manual testing. The remaining facilities were tested under the mobile contact voltage program. Of the 160,561 underground facilities visited during manual testing, 925 did not require contact voltage testing due to inaccessibility, structures taken out of service, or customer owned structures.

Inaccessible underground facilities include:

a. *Locked Gate/Fence* – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.

b. *Company Property* – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
c. *Construction* – A structure located within a construction site. These structures are accessible only to construction personnel.

d. *Buried* – A structure below grade that requires excavation to access the structure.

e. *Vaults* – Structures located inside buildings. These structures are accessible only to Company and building maintenance personnel.

f. *Highway* – Structures located on highways and on exit and entrance highway ramps. The performance of contact voltage testing would constitute an unacceptable risk to the employee.

Overhead System Contact Voltage Testing

Of the population of 279,202 overhead facilities (Con Edison owned) that were visited to be tested for contact voltage, 2,278 did not require contact voltage testing because of the reasons stated below.

Inaccessible overhead facilities include:

a. *Locked Gate/Fence* – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.

b. *Company Property* – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.

c. *Construction* – A structure located within a construction site. These structures are accessible only to construction personnel.

d. *Highway* – Structures located on highways and exit and entrance highway ramps. The performance of contact voltage testing would constitute an unacceptable risk to the employee.

e. *Rail Road* – Structures behind railroad fences or on a railroad right-of-way.

Streetlight and Traffic Signal Contact Voltage Testing

Of the total population of approximately 185,000 streetlight and traffic signal facilities, approximately 117,000 facilities to which the Company directly supplies electric service (or are located on public thoroughfare) were required to be tested manually. The remaining facilities were tested under the mobile contact voltage program. Of the facilities visited, 879 did not require contact voltage testing because these structures were not publicly accessible.

Inaccessible streetlights and traffic signals include:

a. *Construction* – A structure located within a construction site. These structures are only accessible to construction personnel.

b. *Restricted Access* – Structures located within areas with active public improvement efforts or the World Trade Center.

c. *Highway* – Structures located on highways or access roads to highways

Underground Transmission Contact Voltage Testing

Of the population of approximately 2,200 facilities to be inspected, there are approximately 1,900 underground transmission structures that are required to be tested for contact voltage. Those facilities that did not require contact voltage testing are not publicly accessible.

Inaccessible transmission facilities include:

a. *Construction* – A structure located within a construction site. These structures are only accessible to construction personnel.

b. *Con Edison Property* – Structures located on or adjacent to Con Edison properties which are secured from the public via fencing or other barriers and are inaccessible to the public.

c. *Bridges* – Structures located on bridges, such as bridge joints

d. *Buried* - A structure below grade that requires excavation to access the structure

Overhead Transmission Contact Voltage Testing

Con Edison visited and tested all of the 1,212 overhead transmission facilities on the Company's overhead transmission system.

Mobile Contact Voltage Testing

In accordance with the PSC's "Order Establishing Rates for Electric Service," issued March 25, 2008 in Case 08-E-0539, Con Edison performed 12 underground system scans using mobile contact voltage detection technology. In accordance with the PSC's "Order Adopting Changes to Electric Safety Standards," issued December 15, 2008 in Case 04-M-0159, the 12 underground system scans must be performed within each rate year (April 1st to March 31st). In addition, Con Edison performed one underground system scan using mobile contact voltage detection technology annually, as ordered in 10-E-0271, in 3 cities with a population of at least 50,000 in Westchester County in 2012. These cities are New Rochelle, Yonkers, and White Plains.

Results of the 2012 Contact Testing Program

The results of the 2012 Contact Testing Program are provided in the following appendixes to this report:

- Appendix 1, titled "Contact Voltage Testing Summary"
- Appendix 2a, titled, "Summary of Energized Objects - Mobile Testing"
- Appendix 2b, titled, "Summary of Energized Objects - Manual Testing + Other"
- Appendix 3, titled, "Summary of Shock Reports from the Public."

V. Facility Inspection Program

The Commission's Safety Standards, among other things, require all utilities to inspect all electric facilities at least once every five years. The first five-year cycle covered the period of 2005 through 2009. The second cycle is the period of 2010 through 2014. The Safety Standards also require that utilities inspect a minimum number of electric facilities each year of the five-year cycle based on an annual percentage of total electric facilities as follows: 17 percent in the first year, 18 percent in the second year, and 19 percent in the third, fourth and fifth years except that by the end of every fifth year, the utility must ensure that it has inspected 100 percent of its facilities. A utility may inspect its facilities pursuant to a compressed schedule and complete its inspection cycle prior to the end of the five-year period so long as the cumulative number of inspections at the end of any year is at least the minimum number required by the annual target formula – 17 percent in first year, 35 percent by end of second year, 54 percent by end of third year, 73 percent by end of fourth year, and 100 percent by end of fifth year. In addition, the Safety Standards require that defective equipment found during an inspection be repaired. In accordance with the Safety Standards, Con Edison uses the following severity levels to establish priority for repairs and scheduling:

- *Level I* – Repair as soon as possible but not longer than one week. A Level I deficiency is an actual or imminent safety hazard to the public or poses a serious and immediate threat to the delivery of power. Critical safety hazards present at the time of the inspection shall be guarded until the hazard is mitigated. NOTE: Con Edison requires that company forces repair level I defects before leaving the structure.

- *Level II* – Repair within one year. A Level II deficiency is likely to fail prior to the next inspection cycle and represent a threat to safety and / or reliability should a failure occur prior to repair.

    - *Level III* – Repair within three years. A Level III deficiency does not present immediate safety or operational concerns and would likely have minimum impact on the safe and reliable delivery of power if it does fail prior to repair.

    - *Level IV* – Condition found but repairs not needed at this time. Level IV is used to track atypical conditions that do not require repair within a five year timeframe. This level is used for future monitoring purposes and planning proactive maintenance activities.

In accordance with the Safety Standards, when a temporary repair is located during inspection or performed by the Company, best efforts are put forth to make a permanent repair of the facility within 90 days.

Training

Con Edison manages its inspection program and uses both company field personnel and contractor forces to conduct the inspection of utility owned electric facilities.

Training of the contractor force utilized to perform inspections on our Overhead & UG Systems consists of classes at our learning facility as well as on the job training performed by Contractor Oversight Supervisors who have attended a train-the-trainer session with a Con Edison Subject Matter Expert (SME). For company field forces, the training is based on company specifications on how to properly inspect an electric facility which is acquired through their promotional classes, as well as on the job training performed by their supervisor.

In addition to the above, the Secondary System Analysis Section of Distribution Engineering conducted train-the-trainer sessions in each of the major workout locations since the inception of the program. The participants included the managers, planners, and supervisors of the crews that would be performing the inspections. The Secondary System Analysis Team has also conducted various training seminars at all of the major work out locations which included the following topics:

- The PSC Safety Standards
- Scope of the inspection
- Completing the inspection form
- Data entry process
- Status of inspections to annual goal
- Repairs pending
- Accounting of the inspection
- Performance mechanism

In addition to the train-the-trainer sessions, an E-Learning Training Module was developed. This training module can be accessed from any computer on the Con Edison Network. This class is also part of the curriculum in career advancement for new mechanics.

Results of the 2012 Facility Inspection Program

The results of the 2012 Facility Testing Program and associated facility repairs are provided in Appendix 4, titled "Summary of Deficiencies and Repair Activity Resulting from the Inspection Process."

VI. Annual Performance Targets

Con Edison performed the required contact voltage testing and facilities inspections in accordance with the requirements of the Safety Standards.

In compliance with the Safety Standards, Con Edison has met the annual performance target for contact voltage testing of 100% of publicly accessible electric facilities, streetlights, and traffic signals supplied directly from Con Edison's distribution system for the annual period ending December 31, 2012.

In compliance with the Safety Standards, Con Edison has met the third-year performance target for cumulative inspection of 54% of its electric facilities during the first three years (2010 to 2012) of the five-year period ending December 31, 2014. By the end of the third year of this period (December 31, 2012), Con Edison had cumulatively inspected 67.9% of its overall population of electric facilities. The percentages of inspections by structure category are summarized in the table below.

Facility Inspection Program Results

Category	Actual Cumulative Inspected as of 2012
Overhead Distribution	93.26%
Overhead Transmission	100%
Underground / URD Distribution	43.01%
Underground Transmission	83.32%
Substation and PURS Facilities	64.91%
Unit Substations	100%
Company-owned Streetlights*	0

***Con Edison does not own streetlight facilities. These facilities are owned by the City of New York and municipalities located in Westchester County.**

5-Year Inspection Performance Summary

The following tables provide the cumulative percentages of inspections by structure category over the current five-year (2010-2014) inspection cycle.

Overhead Distribution Facilities

Inspection Year	Unique Number of Overhead Distribution Structures Inspected	% of Overall Facilities Inspected (Cumulative)
2010	85,124	31.47%
2011	86,548	63.46%
2012	80,610	93.26%
2013		
2014		

Overhead Transmission Facilities

Inspection Year	Unique Number of Overhead Transmission Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	1212	100%*
2011	1212	100%*
2012	1212	100%*
2013		
2014		

***Con Edison inspects the entirety of its overhead transmission system once a year**

Underground Distribution and URD Facilities

Inspection Year	Unique Number of Underground / URD Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	43,183	15.54%
2011	27,584	25.47%
2012	48,720	43.01%
2013		
2014		

Underground Transmission Facilities

Inspection Year	Unique Number of Underground Transmission Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	542	25.12%*
2011	615	53.61%*
2012	641	83.32%*
2013		
2014		

***Con Edison inspects its underground transmission system at multiple intervals, all less than 5 years. The data above captures all inspections performed. The total number of underground transmission facilities to be inspected is 2158.**

Substation Facilities (including PURS)

Inspection Year	Unique Number of Substation Facilities (including PURS)	% of Overall Facilities Inspected (Cumulative)
2010	26	23.21%
2011	25	44.73%
2012	23	64.91%
2013		
2014		

Unit Substation Facilities

Inspection Year	Unique Number of Unit Substation Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	243	100%
2011	243	100%
2012	243	100%
2013		
2014		

***Con Edison inspects the entirety of its Unit Substation facilities once a year**

VII. Certifications

Pursuant to Section 7 of the Safety Standards, attached as Exhibit 1 of this report are the certifications of Con Edison's officer with direct responsibility for overseeing contact voltage testing and facility inspections that Con Edison has, to the best of his knowledge, exercised due diligence in carrying out a plan, including quality assurance, that is designed to meet the contact voltage testing and inspection requirements, and that Con Edison has:

- Tested all of its publicly accessible electric facilities and street lights, as referred to in the body of the February 15, 2013 Report, and

- Inspected the requisite number of electric facilities.

VIII. Analysis of Causes of Findings and Contact Voltage

All New York State utilities prepare an inventory of all "findings" and report on the number of these findings each year. Section 1(f) of the Safety Standards defines a "finding" as "any confirmed voltage reading on an electric facility or streetlight greater than or equal to 1 volt measured using a volt meter and 500 ohm shunt resistor." Section 1(c) defines Stray Voltage (referred to herein as Contact Voltage) as "voltage conditions on electric facilities that should not ordinarily exist. These conditions may be due to one or more factors, including, but not limited to, damaged cables, deteriorated, frayed, or missing insulation, improper maintenance, or improper installation."

Although not all findings are due to contact voltage, NYS Utilities are required to report on all findings, regardless of whether the voltage is normal to the operating system. In 2012, 6886 voltage findings resulted from contact voltage testing. These findings resulted from 3056 sources of contact voltage. A total of 6841, approximately 94% of these findings, were detected by the Mobile Contact Voltage Testing Program. There were 209 findings (3%) identified by manual contact voltage testing.

In accordance with the Safety Standards requirements, when a finding is discovered on an electric facility or streetlight during manual contact voltage testing, the Company must manually test all publicly accessible structures, streetlights, and sidewalks, within a minimum 30 foot radius of the energized object. An additional 11 findings were found as a result of the 30-foot radius testing.

Contact voltage findings resulted from a variety of conditions including deterioration of conductors and insulation, damaged neutrals and connections, and defective customer equipment. The following table contains a breakdown of the 2012 causes of contact voltage findings that were Con Edison responsibility:

2012 Sources of Contact Voltage Finding
Con Edison Responsibility

Source of Contact Voltage	Con Ed
UG Service	330
UG Streetlight Service	396
UG Streetlight Con Edison Neutral	82
UG Main	121
Secondary Burnout	110
UG Service Con Edison Neutral	182
Crab	33
UG Main Con Edison Neutral	23
Abandoned Service	30
Sump Pump	22
Abandoned SL Service	14
Overhead Streetlight Service Neutral	3
Loose UG SL Service Connection	1
Con Ed S/L Reversed Polarity	1
Damaged/Missing Ground	1
Overhead Service	13
Overhead Service Neutral	13
Overhead Streetlight Service	8
Temporary Service	8
Overhead Secondary	11
Defective Transformer Equipment and Gap	4
Defective Pigtail/ISO	10
Overhead Primary	1
Duct	1
Total	**1419**

The following table contains a breakdown of the 2012 causes of contact voltage findings that were the responsibility of entities other than Con Edison ("Non Con Edison Responsibility"):

2012 Sources of Contact Voltage
Non Con Edison Responsibility

Source of Contact Voltage	Non Con Edison
Defective Customer Equipment	227
Defective Contractor Equipment	58
Defective Internal Streetlight Wiring	1236
Dept. of Transportation (DOT)/City Streetlight Neutral	49
Defective Neon Sign	23
DOT Temp Service	15
DOT Reverse Polarity	7
Contractor or Customer Damage	22
Total	**1637**

Mitigation through Detection

Five factors affect the likelihood that a member of the public or animal could experience a shock. These factors are the number of energized structures (ENEs), duration of a mobile system scan, voltage levels associated with the ENEs, population density, and the weather. A table containing the breakdown of Electric Shock Reports (ESRs) reported to Con Edison during 2012 can be found in Appendix 3.

Since the likelihood of an ESR will increase or decrease in proportion to the total number of energized structures, the detection and repair of identified sources of contact voltage is the principal mitigation effort for reducing ESRs. Each completed repair effectively represents a mitigation of possible ESRs. As these repairs accumulate over time, the potential ESRs decrease accordingly.

Although, ENE voltage levels and population density are recognized as contributory factors in ESR occurrences, these two factors are not subject to control such that they can be meaningfully incorporated into ESR or Generation Rate analyses.

The ESRs associated with Con Edison's equipment appear on Chart 1. As mentioned above, weather also plays a role in ESR generation. The lower precipitation in 2012 decreased the generation rate of Con Edison responsible ESRs. This weather variable is accounted for in the underlying models and in both the 2012 and long term predictions. The duration between scans ranges from approximately 30 to 35 days per scan. If we continue with a comparable ENE repair rate and scan interval in 2013, as well as experience similar weather

patterns, we can expect ESRs to be approximately 2 per scan. This prediction is consistent with the 2012 actual results of 15shocks due to Con Edison responsibility.

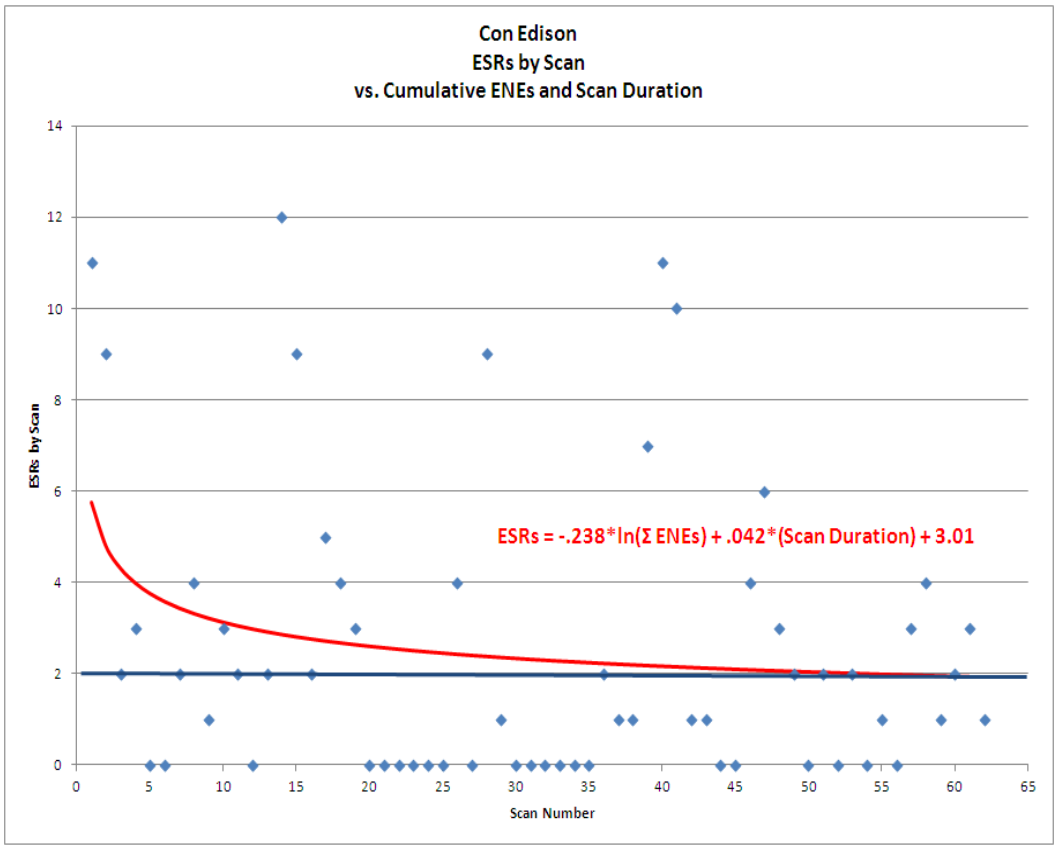


Chart 1

The reduction of ESRs associated with the DOT appears on Chart 2. The duration of scans is 30 to 35 days per scan. If we continue a comparable ENE repair rate and scan duration in 2013, we can expect ESRs at this scan duration level to be approximately 1 per scan. The expected ESR per scan rate has increased from 1 ESR every 2 scans to 1 ESR per scan. In 2012 there were 2 shocks associated with DOT equipment failures. This result is better than predicted, and is likely the result of various programs implemented by both DOT and Con Edison to mitigate shocks.

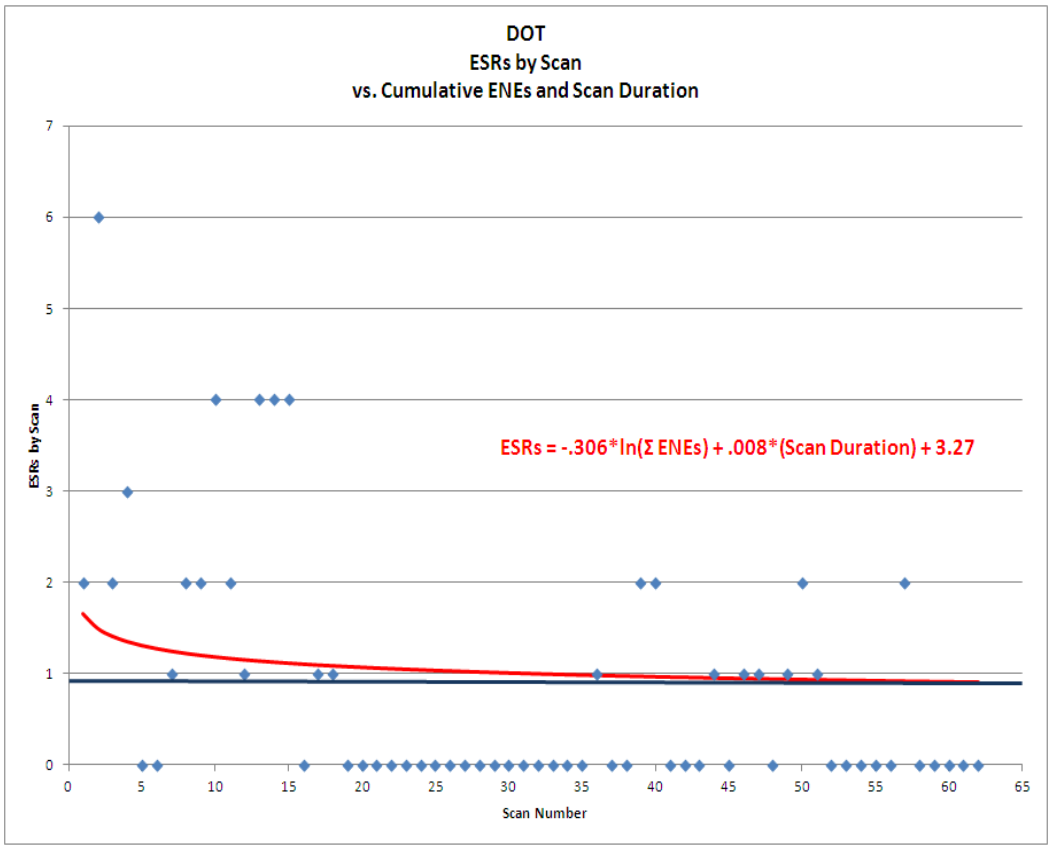


Chart 2

The reduction of ESRs associated with Customer Equipment (Public Access) appears on Chart 3. The duration of scans is 30 to 35 days per scan. If we continue a comparable ENE repair rate and scan duration in 2013, we can expect ESRs to remain at 2 per scan, with no significant reduction anticipated below that level in the near future. The actual performance indicates that these shock events are less sensitive to our mitigation efforts than we initially projected. In 2012, we responded to 37 validated shock reports on publicly accessible customer equipment.

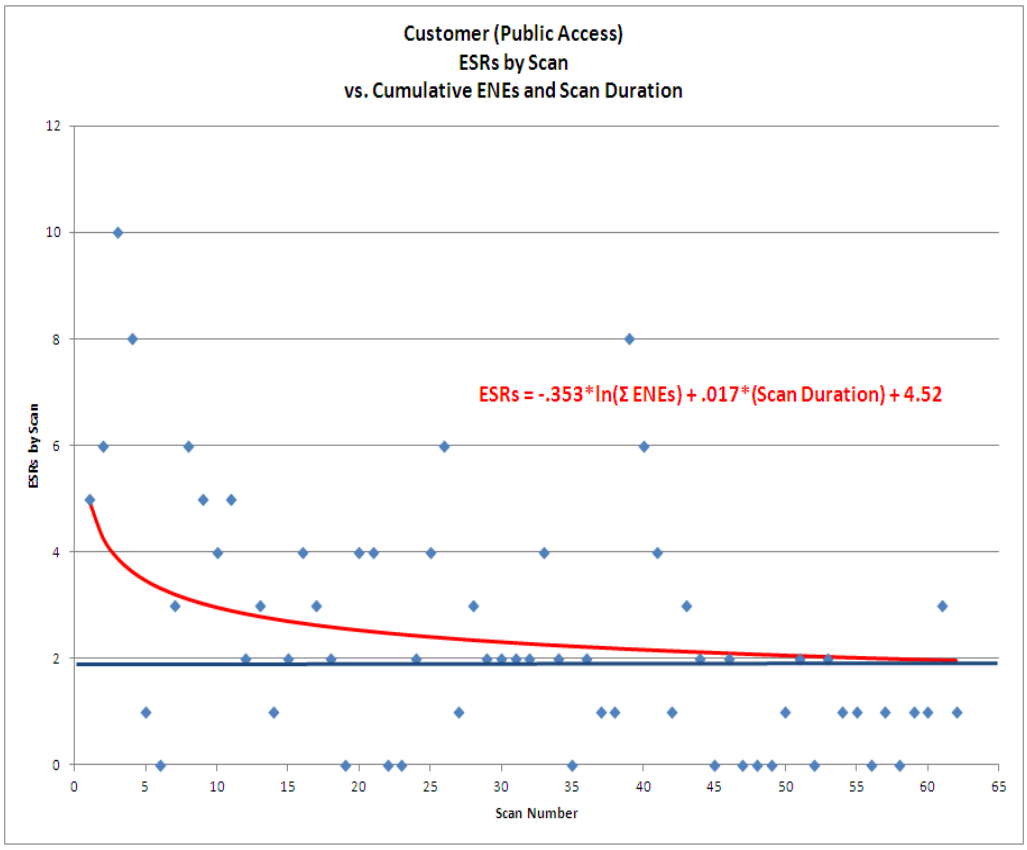


Chart 3

As mentioned in previous year's report a strong correlation was observed between weather and shocks during 2012.

When we look at snow and rainfall year over year (chart 4), we see the system response to ground conditions, as level of precipitation change from 2009 to 2012. As snowfall and rainfall increase from 2009 to 2011, ESRs also increase and as snow and rainfall decreased there is a decrease in number of ENE/ESR in 2012. We will continue to monitor this correlation in 2013.

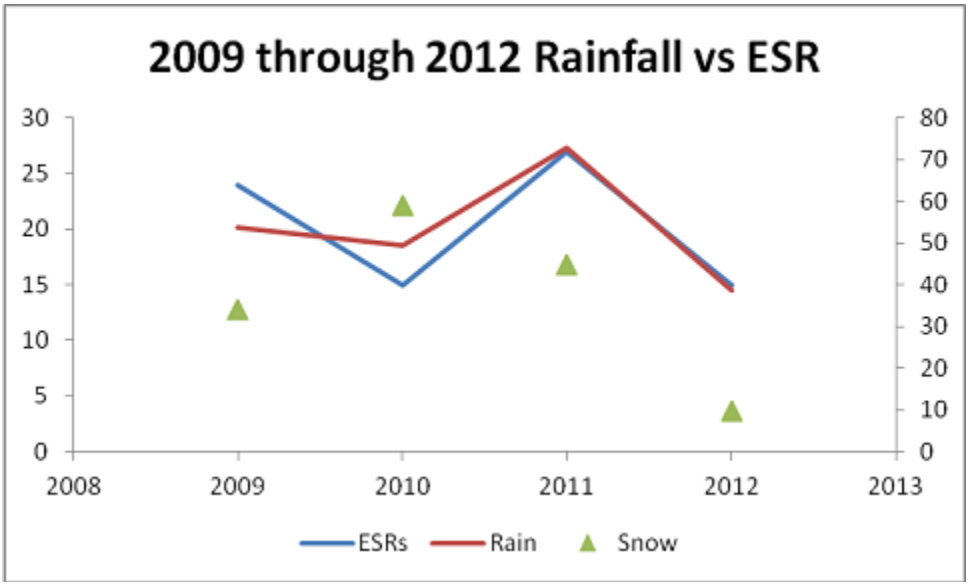


Chart 4

IX. Analysis of Inspection Results

Inspection Breakdown

Facility Inspection Program	2010	2011	2012	2013	2014	5-Year Cumulative Unique Inspections	Percent Completed
Distribution Underground/URD	43,183	27,584	48,720			119,487	43.01%
Distribution Overhead	85,124	86,548	80,610			252,282	93.26%
Transmission Underground	542	615	641			1,798	83.32%
Transmission Overhead	1,212	1,212	1,212			1,212	100.00%
Substations	23	23	21			67	65.05%
PURS Facilities	3	2	2			7	63.64%
Unit Substations	243	243	243			243	100.00%
Total	**130,330**	**116,227**	**131,449**			**375,096**	**67.94%**

Overhead Distribution Structures

Breakdown of Locations with Deficiencies**

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	27	0.24%
2	545	4.89%
3	8,732	70.31%
4	1,846	16.56%
Total:	**11,150**	**100.00%**

Overhead Transmission Facilities

Breakdown of Locations with Deficiencies**

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	0	0.00%
2	0	0.00%
3	126	20.97%
4	475	73.03%
Total:	**601**	**100.00%**

Underground Distribution and URD Facilities

Breakdown of Locations with Deficiencies**

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	39,450	39%
2	6,131	6%
3	4,030	4%
4	51,084	51%
Total:	**100,695**	**100%**

**** Locations may have multiple deficiencies**

Streetlights

Con Edison does not own streetlight facilities. Streetlight facilities in the Company's service area are owned by the City of New York and municipalities located in Westchester County.

Repair of Deficiencies

During 2012, the Company repaired 99.9% of the Level I defects found, 54.7% of the Level II defects found, 14.2% of the Level III defects found, and 5.7% of the level IV defects found. Thus, 76.0% of the Level I, II & III defects found in 2012 was repaired in 2012. The total number of open and overdue repairs from the 2012 Underground, Overhead, and URD programs is 56.

As of February 13th, 2013, 25 Level I's from 2012 are reported as open and overdue in the Underground and URD programs. These include 24 repairs associated with the URD Program and 1 repair associated with the Underground Program. All of our open level I defects from 2011 UG program have been repaired.

As of February 13th, 2013, 1,308 Level II repairs identified in 2011 in the Underground, Overhead, and URD programs were reported as open and overdue with the majority being in our Underground and Overhead Programs. We are in the process of making these repairs.

Temporary Repairs

Our inspection database identifies temporary repairs that have remained in place more than 90 days as shown in the following chart:

	Level I	Level II	Level III
Underground Distribution	8	60	42
Overhead Distribution	1	2	1
URD	10	9	4

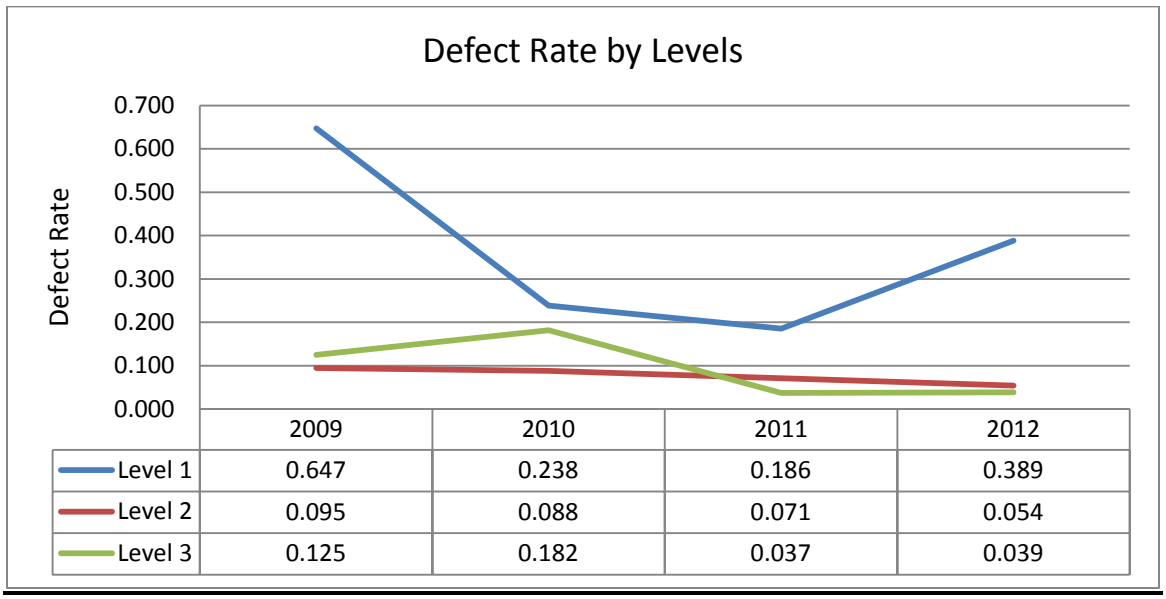
There is one Level I temporary repair on the overhead system, a leaking aerial joint that has been protected to prevent it from impacting the environment. This section of aerial cable is awaiting replacement. The level I temporary repairs on the UG & URD system are currently being reviewed. The majority should have been completed in the field and are pending administrative closure.

The majority of Level II and III temporary repairs were made during the initial inspection prior to the crew leaving the work site. We are in the process of making these repairs permanent within the one and three year periods applicable to correction of Level II and Level III conditions, respectively.

Once the company's new work management system for Electric Operations is complete in 2014, all repair work (including new and existing defects) and inspections will be issued, captured, and tracked within that system.

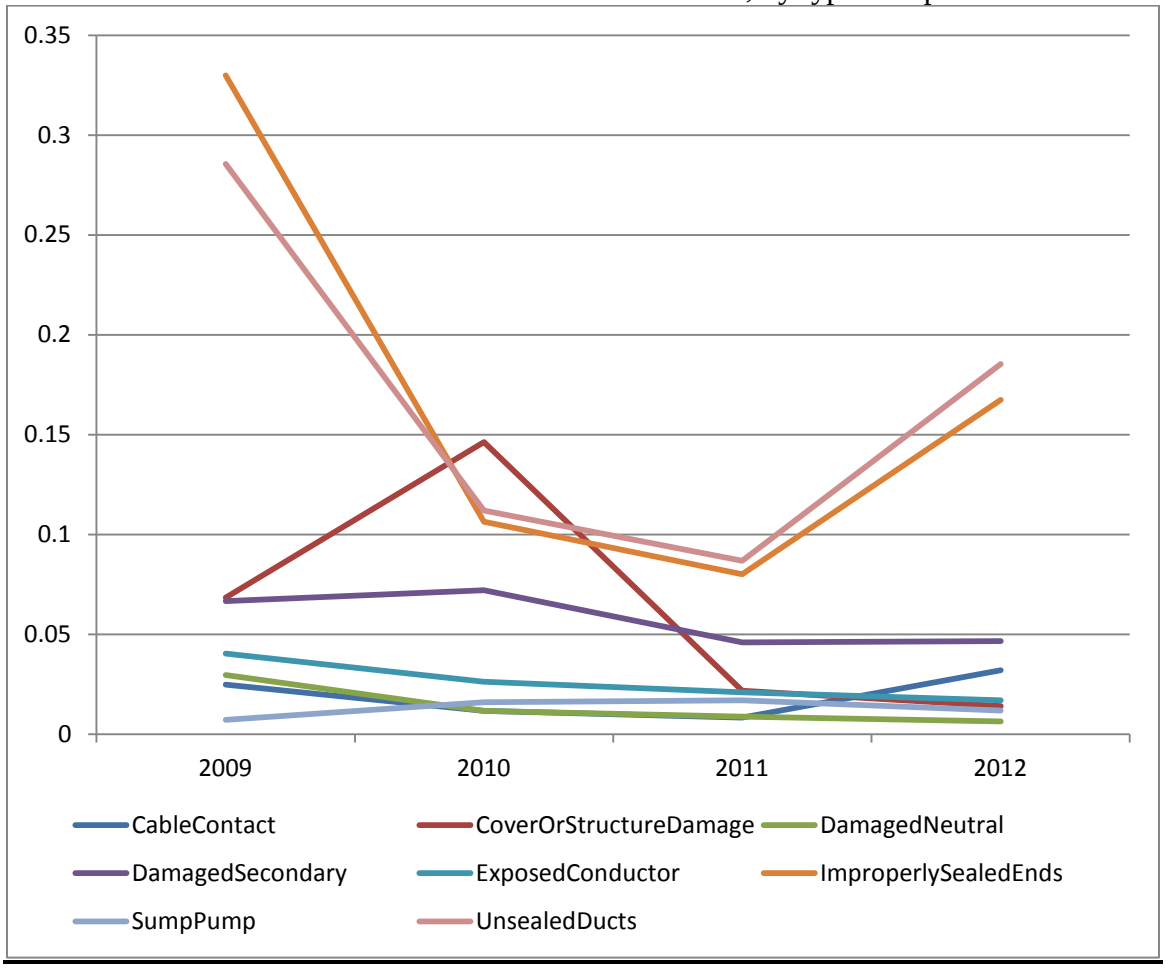
Analysis of Defects Found

The chart below shows the number of defects found per inspection:



	2009	2010	2011	2012
Level 1	0.647	0.238	0.186	0.389
Level 2	0.095	0.088	0.071	0.054
Level 3	0.125	0.182	0.037	0.039

The defect found ratio can be broken down further, by type of repair:



For most categories, we see a minor decrease in defect rate from 2009 thru 2012. There are three categories where we see an increase in the defect rate: unsealed ducts, cable in contact and improperly sealed ends. We are currently investigating this increase, but we believe there may be multiple factors contributing to the increases. For example: 1) An increase in the flushing of structures (more vented covers on the system), 2) Our current tracking system (EDIS), in some cases, does not allow us to differentiate between defects found due to field conditions versus defects created during a new installation process (i.e. new crab installations), 3) Natural wear and tear from the elements.

X. Quality Assurance

The Safety Standards require electric companies to develop a quality assurance program to "ensure timely and proper compliance with these safety standards." Con Edison has developed a comprehensive quality assurance program to address the contact voltage testing and facility inspections requirements. The quality assurance program includes:

- Contact voltage testing of underground distribution structures including Underground Residential Distribution (URD), overhead distribution structures and municipality owned streetlights
- Contact voltage testing of transmission and substation facilities
- Facility inspections of underground distribution, URD, and overhead distribution structures
- Facility inspections of transmission facilities and substation facilities

This section addresses Con Edison's quality assurance program for the aforementioned contact voltage testing and facility inspections.

Quality Assurance Measures Instituted: Contact Voltage Testing of Underground Distribution Structures, Overhead Distribution Structures, and Municipality Owned Streetlights.

Con Edison developed a quality assurance plan to ensure that contact voltage testing was performed as specified. The reliability and error design parameters used were:

> *95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.*

1200 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the contact voltage tests were conducted in accordance with Company specifications.

Specification EO-10315 (Quality Assurance of the Contact (Stray) Voltage and Periodic Distribution Structure Safety Inspection Programs) calls for 1200 quality assurance checks to be performed on the contractor contact voltage testing. The quality assurance checks are randomly selected from a database of all contact voltage tests and includes a field test for contact voltage. Con Edison performed 400 quality assurance checks of the underground distribution structures including underground residential distribution (URD), 400 quality assurance checks of overhead distribution structures and 400 quality assurance checks of municipality owned streetlights. Contact voltage was not found during any of these quality assurance reviews. In addition to the 1200 quality assurance checks discussed above, Con Edison also conducted Random Quality Assurance reviews of "work in progress."

Quality Assurance Measures Instituted: Contact Voltage Testing of Transmission and Substation Facilities.

In accordance with CE-ES-1043, a planner in Transmission Line Maintenance who has knowledge and expertise in overhead transmission, but who did not perform or directly supervise the contact voltage testing, conducted quality assurance inspections at locations on various transmission lines for overhead transmission facilities. Contact voltage was not found during any of these quality assurance reviews.

Con Edison performed several types of quality assurance on the underground transmission contact voltage-testing program. Contractors, who also performed testing on underground distribution structures, performed the contact voltage testing of underground transmission facilities. Following this contact voltage testing, Con Edison Construction Management personnel performed audits at several locations. Contact voltage was not found during any of these quality assurance reviews.

Substations Operations Methods and Procedures group performed quality assurance for the substation contact voltage-testing program. The quality assurance consisted of a documents search, records review, as well as physical contact voltage testing. Contact voltage was not found during any of these quality assurance reviews.

Quality Assurance performed a quality review on a randomly selected sample of unit substations. Contact voltage was not found during any of these quality assurance reviews.

These QA checks confirmed the accuracy of the results from the Contact voltage-testing program.

Quality Assurance Measures Instituted: Inspections of Underground Distribution Structures and Overhead Distribution Structures.

A Central Quality Assurance group (QA) was established to oversee work done on the underground electrical system. QA observes specification compliance of the underground inspection program. EO-10315 (Quality Assurance of the Contact Voltage and Periodic Distribution Structure Safety Inspection Programs) establishes standards for the QA program in order to ensure that the underground structure inspections are performed in accordance with the Safety Standards and Con Edison's specifications. The reliability and error design parameters used were:

> *95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.*

800 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the inspections were conducted in accordance with Company specifications.

Con Edison employees from the centralized quality assurance department conduct the quality assurance for each of the Company's operating regions. These employees are experienced cable splicers, linemen and mechanics that have been trained in facility inspection and the quality assurance specifications.

The quality assurance personnel performed a complete re-inspection of 400 underground and 400 overhead facilities. The results of the randomly selected facilities are compared with the results to the previous inspected facilities. Deficiencies identified during quality assurance reviews are communicated to field crews, supervisors, planners, and managers who have been required to reinforce inspection procedures with field crews.

Quality Assurance Measures Instituted: Transmission and Substation Facility Inspections.

Company specifications CE-SS-6830 (Low and Medium Feeder Pressure Periodic Inspection Procedure) and CE-SS-6045 (Inspection and Preventive Maintenance and Contact Voltage Testing of Pipe Type Cable Systems) require that quality assurance inspections of randomly selected transmission manholes be performed. These randomly selected manholes are re-inspected or re-tested by trained and knowledgeable employees who did not perform or directly supervise this work.

Substation Operations' quality assurance program consists of periodic document reviews and field observations to ensure that 100% of the required contact voltage tests and a minimum of 20% of the Safety and Reliability Inspections of Substation facilities will be completed by December 31 of each year and that the testing and inspections are properly conducted.

Quality assurance was performed by members of the SSO Methods and Procedures group and consisted of a documents search, records review, and physical critical visual inspection. Critical visual inspection quality assurance was performed. In addition, all inspection and follow-up work order documentation was reviewed. Work orders are entered into our work management system and processed by appropriate personnel. These work orders are tracked closely until all repairs are completed. All personnel are trained on proper reporting and referral of repairs identified during facility inspections. The quality assurance inspections yielded results indicating that the original inspections were performed in accordance with the applicable specifications.

XI Other Pertinent Information

Con Edison continues to develop tools, techniques, and management applications to improve public safety, troubleshooting, and program efficacy. In 2012, these efforts have included arcing detection through network protector relays, tests of mains and services near ENE sites through parallel and shunt cables, neutral and ground current measurements using flexible current probes, studies of structure vulnerability and program targeting, use of electrically insulated wraps for energized poles, and strategic research partnerships with Columbia University and the Electric Power Research Institute.

Exhibit 1

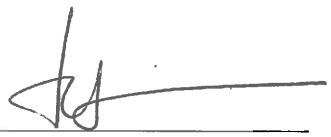
Certification of Contact Voltage Testing

Robert Schimmenti, on this 14 day of February 2013, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's contact voltage testing program, and in that capacity I have monitored the Company's contact voltage testing program during the twelve months ended December 31, 2012 ("the twelve month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the contact voltage testing requirements of the Public Service Commission's Safety Standards, issued in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, during the twelve month period, Con Edison identified and tested for contact voltage (i) all publicly accessible electric facilities owned by the Company, and (ii) all publicly accessible streetlights and traffic signals located in public thoroughfares in the Company's service territory and directly supplied by the Company as identified through a good faith effort by the Company, except for such facilities that are identified in the Company's Annual Report, submitted herewith.



Robert Schimmenti

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Certification of Inspections

Robert Schimmenti, on this 14 day of February 2013, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's electric facility inspection program, and in that capacity I have monitored the Company's inspection program during the twelve months ended December 31, 2012 ("the twelve-month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the inspection requirements established by the Public Service Commission's Safety Standards, issued in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, Con Edison has visually inspected the requisite number of electric facilities during the twelve-month period, including the requirement to have conducted a visual inspection of at least 54% of its electric facilities through December 31, 2012.

Robert Schimmenti

Appendix 1 : Summary of Stray Voltage Testing

	Total System Units Requiring Testing	Units Completed	Percent Completed	Units with Voltage Found* (>= 1.0v)	Percent of Units Tested with Voltage (>= 1.0v)	Units Classified as Inaccessible
Distribution Facilities	279,202	279,782	100%	4	0.001%	2,278
Yearly Update		279,782	100%	4	0.001%	2,278
Underground Facilities	160,415	160,561	100%	0	0.000%	925
Yearly Update		160,561	100%	0	0.000%	925
Street Lights / Traffic Signals	116,546	117,219	100%	216	0.184%	879
Yearly Update		117,219	100%	216	0.184%	879
Substation Fences	392	392	100%	0	0.000%	0
Yearly Update		392	100%	0	0.000%	0
Transmission (69kV and Above)	1,212	1,212	100%	0	0.000%	0
Yearly Update		1,212	100%	0	0.000%	0
TOTAL	557,767	559,166	100%	220	0.039%	4,082
Yearly Update		559,166	100%	220	0.039%	4,082

*Stray voltage sources on Con Edison structures and streetlights

Data Collected January 1, 2012 through December 31, 2012

Appendix 2a : Summary of Energized Objects* - Mobile Testing

conEdison

	2012 Year Jan 1,2012 - Dec 31, 2012						
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25V	Total	< 1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	2	0	1	3	3	0	0
Pole	0	0	1	1	1	0	0
Ground	0	0	0	0	0	0	0
Guy	1	0	0	1	1	0	0
Riser	1	0	0	1	1	0	0
Other	0	0	0	0	0	0	0
Underground Facilities	210	95	10	315	315	0	0
Service Box	172	84	9	265	265	0	0
Manhole	32	11	1	44	44	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault - Cover/Door	4	0	0	4	4	0	0
Pedestal	1	0	0	1	1	0	0
Other	1	0	0	1	1	0	0
Street Lights / Traffic Signals	1,134	466	258	1,858	1,858	0	0
Metal Street Light Pole	358	229	208	795	795	0	0
Traffic Signal Pole	710	203	38	951	951	0	0
Traffic Control Box	6	2	0	8	8	0	0
Pedestrian Crossing Pole	54	27	11	92	92	0	0
Other	6	5	1	12	12	0	0
Substation Fences	0	0	0	0	0	0	0
Fence	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	0	0	0	0	0	0	0
Lattice Tower	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	2,716	1,317	272	4,305	4,304	1	0
Sidewalk	0	0	0	0	0	0	0
Gate/Fence/Awning	584	302	47	933	933	0	0
Traffic Sign	167	78	20	265	265	0	0
Scaffolding	41	23	15	79	78	1	0
Bus Shelter	17	14	2	33	33	0	0
Fire Hydrant	89	19	0	108	108	0	0
Phone Booth	0	0	0	0	0	0	0
Control Box	0	0	0	0	0	0	0
Water Pipe	0	0	0	0	0	0	0
Riser	0	0	0	0	0	0	0
Other	1,818	881	188	2,887	2,887	0	0
Total	4,062	1,878	541	6,481	6,480	1	0

* Data collected from 1/1/2012 through 12/31/2012

** Data collected from 10/1/2012 through 12/31/2012

*** 1 ENE pending customer action

Appendix 2b : Summary of Energized Objects* - Manual Testing + Other

conEdison

	2012 Year Jan 1,2012 - Dec 31, 2012						
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25V	Total	< 1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	5	7	8	20	20	0	0
Pole	2	4	4	10	10	0	0
Ground	0	1	0	1	1	0	0
Guy	2	0	1	3	3	0	0
Riser	0	1	2	3	3	0	0
Other	1	1	1	3	3	0	0
Underground Facilities	7	7	2	16	16	0	0
Service Box	4	1	2	7	7	0	0
Manhole	3	2	0	5	5	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault - Cover/Door	0	2	0	2	2	0	0
Pedestal	0	1	0	1	1	0	0
Other	0	1	0	1	1	0	0
Street Lights / Traffic Signals	86	143	48	277	277	0	0
Metal Street Light Pole	25	92	40	157	157	0	0
Traffic Signal Pole	25	41	5	71	71	0	0
Traffic Control Box	2	2	0	4	4	0	0
Pedestrian Crossing Pole	3	6	0	9	9	0	0
Other	31	2	3	36	36	0	0
Substation Fences	0	0	0	0	0	0	0
Fence	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	0	0	0	0	0	0	0
Lattice Tower	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	18	45	14	77	77	0	0
Sidewalk	0	0	0	0	0	0	0
Gate/Fence/Awning	2	11	1	14	14	0	0
Traffic Sign	0	2	0	2	2	0	0
Scaffolding	1	0	1	2	2	0	0
Bus Shelter	3	2	3	8	8	0	0
Fire Hydrant	2	2	0	4	4	0	0
Phone Booth	0	0	0	0	0	0	0
Control Box	0	1	1	2	2	0	0
Water Pipe	0	3	0	3	3	0	0
Riser	0	0	0	0	0	0	0
Other	10	24	8	42	42	0	0
Total	116	202	72	390	390	0	0

* Data collected from 1/1/2012 through 12/31/2012

** Data collected from 10/1/2012 through 12/31/2012

*** 1 ENE pending customer action

Appendix 3 : Summary of Shock Reports from the Public			
conEdison	2012 4th Quarter Oct 1,2012 - Dec 31, 2012	Quarterly Update**	Yearly Update*
I. Total Shock Calls Received:		**45**	**163**
Unsubstantiated		21	82
Normally Energized Equipment		10	27
Details of Substantiated Stray Voltage Events:		14	54
# of Persons		9	41
# of Animals		5	16
II. Injuries Sustained		**0**	**3**
Utility Responsibility			
Person		0	0
Animal		0	0
Non Utility Responsibility			
Person		0	0
Animal		0	0
Unsubstantiated			
Person		0	3
Animal		0	0
III. Medical Attention Received		**1**	**4**
Utility Responsibility			
Person		0	0
Animal		0	0
Non Utility Responsibility			
Person		1	1
Animal		0	0
Unsubstantiated			
Person		0	3
Animal		0	0
IV. Voltage Source:		**14**	**54**
Utility Responsibility:			
Issue with primary, joint, or transformer		0	0
Secondary Joint (Crab)		1	1
SL Service Line		0	0
Abandoned SL Service Line		0	0
Abandoned Service Line		0	1
Defective Service Line		2	7
OH Secondary		0	0
OH Service		0	3
OH Service Neutral		1	3
OH SL Service		0	0
OH SL Service Neutral		0	0
Pole		0	0
Riser		0	0
Other		0	0
Customer Responsibility:			
Contractor Damage		0	2
Customer Equipment/Wiring		10	33
Other Utility/Gov't Agency Responsibility:			
SL Base Connection		0	1
SL Internal Wiring or Light Fixture		0	1
Overhead Equipment		0	0
Other		0	2
V. Voltage Range:		**14**	**54**
1.0V to 4.4V		0	3
4.5V to 24.9V		4	14
25V and above		6	31
No Reading		4	6

* Data collected from 1/1/2012 through 12/31/2012

** Data collected from 10/1/2012 through 12/31/2012

*** 1 ENE pending customer action

Appendix 4 : Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Distribution															
Overhead Facilities	**2009**			**2010**			**2011**			**2012**			**2013**		
Priority Level	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**
Repair Expected	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**
Poles															
Pole Condition															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies			**4,272**			**5,130**			**2,266**			**3,995**			
Repaired in Time Frame			**4,006**			**894**			**74**			**78**			
Repaired - Overdue			**39**			**0**			**0**			**0**			
Not Repaired - Not Due			**0**			**4,236**			**2,192**			**3,917**			
Not Repaired - Overdue			**227**			**0**			**0**			**0**			
Anchors/Guy Wire															
Number of Deficiencies			**34**			**391**			**341**			**927**			
Repaired in Time Frame			**21**			**70**			**18**			**11**			
Repaired - Overdue			**3**			**0**			**0**			**0**			
Not Repaired - Not Due			**0**			**321**			**323**			**916**			
Not Repaired - Overdue			**10**			**0**			**0**			**0**			
Cross Arm/Bracing															
Number of Deficiencies		**123**			**435**			**236**			**120**				
Repaired in Time Frame		**118**			**215**			**93**			**16**				
Repaired - Overdue		**5**			**126**			**4**			**0**				
Not Repaired - Not Due		**0**			**0**			**0**			**104**				
Not Repaired - Overdue		**0**			**94**			**139**			**0**				
Riser															
Number of Deficiencies			**617**			**731**			**660**			**605**			
Repaired in Time Frame			**594**			**48**			**18**			**17**			
Repaired - Overdue			**0**			**0**			**0**			**0**			
Not Repaired - Not Due			**0**			**683**			**642**			**588**			
Not Repaired - Overdue			**23**			**0**			**0**			**0**			

Conductors																
Primary Wire/Broken Ties																
Number of Deficiencies	3	337	4,862	27	1,189	5,033	15	379	4,000	17	236	3,032				
Repaired in Time Frame	3	274	4,417	5	719	1,503	6	211	340	3	74	155				
Repaired - Overdue	0	63	166	22	319	0	9	0	0	14	0	0				
Not Repaired - Not Due	0	0	0	0	0	3,530	0	0	3,660	0	162	2,877				
Not Repaired - Overdue	0	0	279	0	151	0	0	168	0	0	0	0				
Secondary Wire																
Number of Deficiencies			29			548			95			88				
Repaired in Time Frame			26			89			14			22				
Repaired - Overdue			2			0			0			0				
Not Repaired - Not Due			0			459			81			66				
Not Repaired - Overdue			1			0			0			0				
Neutral																
Number of Deficiencies		185			19			18			10					
Repaired in Time Frame		185			15			11			4					
Repaired - Overdue		0			3			0			0					
Not Repaired - Not Due		0			0			0			6					
Not Repaired - Overdue		0			1			7			0					
Insulators																
Number of Deficiencies		108			414			241			111					
Repaired in Time Frame		107			226			80			22					
Repaired - Overdue		1			98			1			0					
Not Repaired - Not Due		0			0			0			89					
Not Repaired - Overdue		0			90			160			0					
Pole Equipment																
Transformers																
Number of Deficiencies	4			33			3			7						
Repaired in Time Frame	3			18			0			4						
Repaired - Overdue	1			15			3			3						
Not Repaired - Not Due	0			0			0			0						
Not Repaired - Overdue	0			0			0			0						
Cutouts																
Number of Deficiencies				3			7			3						
Repaired in Time Frame				1			4			1						
Repaired - Overdue				2			3			2						
Not Repaired - Not Due				0			0			0						
Not Repaired - Overdue				0			0			0						

Lightning Arrestors															
Number of Deficiencies		**33**			**71**			**32**			**68**				
Repaired in Time Frame		**33**			**28**			**14**			**2**				
Repaired - Overdue		**0**			**29**			**0**			**0**				
Not Repaired - Not Due		**0**			**0**			**0**			**66**				
Not Repaired - Overdue		**0**			**14**			**18**			**0**				
Other Equipment															
Number of Deficiencies			**95**			**126**			**42**			**85**			
Repaired in Time Frame			**79**			**41**			**2**			**8**			
Repaired - Overdue			**1**			**0**			**0**			**0**			
Not Repaired - Not Due			**0**			**85**			**40**			**77**			
Not Repaired - Overdue			**15**			**0**			**0**			**0**			
Miscellaneous															
Trimming Related															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Other															
Number of Deficiencies		**1,293**													
Repaired in Time Frame		**1,293**													
Repaired - Overdue		**0**													
Not Repaired - Not Due		**0**													
Not Repaired - Overdue		**0**													
Overhead Facilities Total															
Total															
Number of Deficiencies	**7**	**2,079**	**9,909**	**63**	**2,128**	**11,959**	**25**	**906**	**7,404**	**27**	**545**	**8,732**			
Repaired in Time Frame	**6**	**2,010**	**9,143**	**24**	**1,203**	**2,645**	**10**	**409**	**466**	**8**	**118**	**291**			
Repaired - Overdue	**1**	**69**	**211**	**39**	**575**	**0**	**15**	**5**	**0**	**19**	**0**	**0**			
Not Repaired - Not Due	**0**	**0**	**0**	**0**	**0**	**9,314**	**0**	**0**	**6,938**	**0**	**427**	**8,441**			
Not Repaired - Overdue	**0**	**0**	**555**	**0**	**350**	**0**	**0**	**492**	**0**	**0**	**0**	**0**			

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Transmission

Transmission Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Towers/Poles															
Steel Towers															
Number of Deficiencies			**41**			**42**			**32**			**0**			
Repaired in Time Frame			**41**			**42**			32			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Poles															
Number of Deficiencies									**2**			**0**			
Repaired in Time Frame									2			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Anchors/Guy Wire															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Crossarm/Brace															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies		**51**			**60**				**9**			**0**			
Repaired in Time Frame		**51**			**60**				**9**			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			

Conductors															
Cable															
Number of Deficiencies									**10**			**0**			
Repaired in Time Frame									**10**			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Static/Neutral															
Number of Deficiencies	**1**			**1**					**6**			**0**			
Repaired in Time Frame	**1**			**1**					**6**			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Insulator															
Number of Deficiencies			**17**	**1**		**17**			**11**			**126**			
Repaired in Time Frame			**17**	**1**		**17**			**11**			**16**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**110**			
Not Repaired - Overdue												**0**			
Miscellaneous															
Right of Way Condition															
Number of Deficiencies		**18**			**20**	**39**			**103**			**0**			
Repaired in Time Frame		**18**			**20**	**39**			**103**			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Other															
Number of Deficiencies					**2**	**14**			**1**			**0**			
Repaired in Time Frame					**2**	**14**			**1**			**0**			
Repaired - Overdue												**0**			
Not Repaired - Not Due												**0**			
Not Repaired - Overdue												**0**			
Transmission Facilities Total															
Total															
Number of Deficiencies	**1**	**69**	**58**	**2**	**82**	**112**	**0**	**0**	**174**	**0**	**0**	**126**			
Repaired in Time Frame	**1**	**69**	**58**	**2**	**82**	**112**	**0**	**0**	**174**	**0**	**0**	**16**			
Repaired - Overdue	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			
Not Repaired - Not Due	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**110**			
Not Repaired - Overdue	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Underground

Underground Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Underground Structures															
Damaged Cover															
Number of Deficiencies		2,058			1,607			1,318			1,169				
Repaired in Time Frame		831			1,006			886			400				
Repaired - Overdue		1,182			533			184			0				
Not Repaired - Not Due		0			0			0			769				
Not Repaired - Overdue		45			68			248							
Damaged Structure															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Congested Structure															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Damaged Equipment															
Number of Deficiencies	8	14	2,283	62	198	260	41	218	112	37	216	69			
Repaired in Time Frame	5	12	2,278	40	157	139	12	163	51	14	120	28			
Repaired - Overdue	3	2	0	22	25	0	29	12	0	19	0	0			
Not Repaired - Not Due	0	0	0	0	0	120	0	0	61	0	96	41			
Not Repaired - Overdue	0	0	5	0	16	1	0	43	0	4	0	0			
Conductors															
Primary Cable															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Secondary Cable															
Number of Deficiencies		**4,993**	**12,631**		**3,716**	**4,726**		**2,608**	**3,019**		**2,528**	**3,792**			
Repaired in Time Frame		**3,339**	**9,684**		**3,166**	**3,202**		**2,320**	**1,812**		**1,840**	**1,456**			
Repaired - Overdue		**1,654**	**1,371**		**528**	**0**		**116**	**0**		**0**	**0**			
Not Repaired - Not Due		**0**	**0**		**0**	**1,517**		**0**	**1,207**		**688**	**2,336**			
Not Repaired - Overdue		**0**	**1,576**		**22**	**7**		**172**	**0**			**0**			
Neutral Cable															
Number of Deficiencies		**8,481**			**1,006**			**736**			**633**				
Repaired in Time Frame		**7,422**			**802**			**570**			**337**				
Repaired - Overdue		**1,059**			**194**			**83**			**0**				
Not Repaired - Not Due		**0**			**0**			**0**			**296**				
Not Repaired - Overdue		**0**			**10**			**83**			**0**				
Racking Needed															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies	**108,186**	**309**		**20,064**	**1,049**		**15,060**	**1,073**		**38,605**	**834**				
Repaired in Time Frame	**108,186**	**11**		**19,871**	**702**		**14,907**	**703**		**38,484**	**466**				
Repaired - Overdue	**0**	**297**		**193**	**335**		**152**	**157**		**112**	**0**				
Not Repaired - Not Due	**0**	**0**		**0**	**0**		**0**	**0**		**0**	**368**				
Not Repaired - Overdue	**0**	**1**		**0**	**12**		**1**	**213**		**9**	**0**				
Underground Facilities Total															
Total															
Number of Deficiencies	**108,194**	**15,855**	**14,914**	**20,126**	**7,576**	**4,986**	**15,101**	**5,953**	**3,131**	**38,642**	**5,380**	**3,861**			
Repaired in Time Frame	**108,191**	**11,615**	**11,962**	**19,911**	**5,833**	**3,341**	**14,919**	**4,642**	**1,863**	**38,498**	**3,163**	**1,484**			
Repaired - Overdue	**3**	**4,194**	**1,371**	**215**	**1,615**	**0**	**181**	**552**	**0**	**131**	**0**	**0**			
Not Repaired - Not Due	**0**	**0**	**0**	**0**	**0**	**1,637**	**0**	**0**	**1,268**	**0**	**2,217**	**2,377**			
Not Repaired - Overdue	**0**	**46**	**1,581**	**0**	**128**	**8**	**1**	**759**	**0**	**13**	**0**	**0**			

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Pad Mount Transformers

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Pad Mount Transformers															
Damaged Structure															
Number of Deficiencies		229		17	194		31	35	33	74	25	24			
Repaired in Time Frame		57		8	94		17	28	19	34	7	6			
Repaired - Overdue		154		9	57		12	3	0	32	0	0			
Not Repaired - Not Due		0		0	0		0	0	14	0	18	18			
Not Repaired - Overdue		18		0	43		2	4	0	8	0	0			
Damaged Equipment															
Number of Deficiencies		7			31										
Repaired in Time Frame		1			14										
Repaired - Overdue		5			9										
Not Repaired - Not Due		0			0										
Not Repaired - Overdue		1			8										
Cable Condition															
Number of Deficiencies	116	44	9	10	275		58	496	108	66	488	145			
Repaired in Time Frame	111	5	1	8	158		45	332	42	54	240	28			
Repaired - Overdue	5	34	0	2	91		10	69	0	7	0	0			
Not Repaired - Not Due	0	0	0	0	0		0	0	66	0	248	117			
Not Repaired - Overdue	0	5	8	0	26		3	95	0	5		0			
Oil Leak															
Number of Deficiencies	1	1		3	2		16	2		11	4				
Repaired in Time Frame	0	0		3	2		11	1		10	3				
Repaired - Overdue	1	0		0	0		0	0		0	0				
Not Repaired - Not Due	0	0		0	0		0	0		0	1				
Not Repaired - Overdue	0	1		0	0		5	1		1	0				
Off Pad															
Number of Deficiencies				13			9			4					
Repaired in Time Frame				10			4			3					
Repaired - Overdue				3			1			0					
Not Repaired - Not Due				0			0			0					
Not Repaired - Overdue				0			4			1					

Lock/Latch/Penta																
Number of Deficiencies	**11**			**42**			**45**			**33**						
Repaired in Time Frame	**5**			**42**			**44**			**33**						
Repaired - Overdue	**6**			**0**			**0**			**0**						
Not Repaired - Not Due	**0**			**0**			**0**			**0**						
Not Repaired - Overdue	**0**			**0**			**1**			**0**						
Miscellaneous																
Other																
Number of Deficiencies	**469**	**10**		**90**	**122**	**191**	**334**	**218**	**9**	**620**	**234**					
Repaired in Time Frame	**469**	**0**		**87**	**114**	**47**	**325**	**198**	**4**	**571**	**120**					
Repaired - Overdue	**0**	**9**		**3**	**7**		**6**	**7**	**0**	**33**	**0**					
Not Repaired - Not Due	**0**	**0**		**0**	**0**	**144**	**0**	**0**	**5**	**0**	**114**					
Not Repaired - Overdue	**0**	**1**		**0**	**1**	**0**	**3**	**13**	**0**	**16**	**0**					
Pad Mount Total																
Total																
Number of Deficiencies	**597**	**291**	**9**	**175**	**624**	**191**	**493**	**751**	**150**	**808**	**751**	**169**				
Repaired in Time Frame	**585**	**63**	**1**	**158**	**382**	**47**	**446**	**559**	**65**	**705**	**370**	**34**				
Repaired - Overdue	**12**	**202**	**0**	**17**	**164**	**0**	**29**	**79**	**0**	**72**	**0**	**0**				
Not Repaired - Not Due	**0**	**0**	**0**	**0**	**0**	**144**	**0**	**0**	**85**	**0**	**381**	**135**				
Not Repaired - Overdue	**0**	**26**	**8**	**0**	**78**	**0**	**18**	**113**	**0**	**31**	**0**	**0**				

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Streetlights

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Streetlights															
Base/Standar/Light															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Handhole/Service Box															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Service/Internal Wiring															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Access Cover															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Streetlight Total															
Total															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Year	Prority Level / Repair Expected		Deficiencies Found (Total)	Repaired In-Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired - Overdue
2009							
	I	Within 1 week	108,799	108,783	16	0	0
	II	Within 1 year	18,294	13,757	4,465	0	72
	III	Within 3 years	24,890	21,164	1582	0	2,144
	IV	N/A	36,254	16,515	N/A	19,739	N/A
2010							
	I	Within 1 week	20,366	20,095	271	0	0
	II	Within 1 year	10,410	7,500	2,354	0	556
	III	Within 3 years	17,248	6,145	0	11,095	8
	IV	N/A	61,026	10,859	N/A	50,167	N/A
2011							
	I	Within 1 week	15,619	15,375	225	0	19
	II	Within 1 year	7,610	5,610	636	0	1,364
	III	Within 3 years	10,859	2,568	0	8,291	0
	IV	N/A	40,560	5,579	N/A	34,981	N/A
2012							
	I	Within 1 week	39,477	39,211	222	0	44
	II	Within 1 year	6,676	3,651	0	3,025	0
	III	Within 3 years	12,888	1,825	0	11,063	0
	IV	N/A	53,405	3,029	N/A	50376	N/A
2013							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Level IV Conditions										
Overhead Facilities	**2009**		**2010**		**2011**		**2012**		**2013**	
	Number of Conditions Found	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**
Overhead Facilities										
Pole Condition										
Pole Condition	**7,194**	**6,930**	**10,853**	**140**	**1,183**	**8**	**650**	**3**		
Grounding System										
Anchors/Guy Wire										
Cross Arm/Bracing										
Riser										
Conductors										
Primary Wire/Broken Ties										
Secondary Wire										
Neutral										
Insulators										
Pole Equipment										
Transformers										
Cutouts										
Lightning Arrestors										
Other Equipment										
Miscellaneous										
Trimming Related										
Other	**4,374**	**3,975**	**1,700**	**39**	**924**	**4**	**1,196**	**1**		
Overhead Facilities Total	**11,568**	**10,905**	**12,553**	**179**	**2,107**	**12**	**1,846**	**4**		
Transmission Facilities										
Tower/Poles										
Steel Towers	**44**	**0**	**50**	**50**			41			
Poles	**0**	**0**	**0**	**2**						
Anchors/Guy Wire	**0**	**0**	**0**	**0**						
Crossarm/Brace	**0**	**0**	**0**	**0**						
Grounding System	**37**	**10**	**46**	**46**						
Conductors										
Cable	**157**	**0**	**185**	**185**			10			
Static/Neutral	**6**	**3**	**7**	**7**			4			
Insulators	**184**	**12**	**316**	**316**						
Miscellaneous										
Right of Way Conditions	**169**	**4**	**259**	**259**			6			
Other	**290**	**145**	**172**	**172**			**414**			
Transmission Facilities Total	**887**	**174**	**1,035**	**1,037**	**0**	**0**	**475**	**0**		
Underground Facilities										
Underground Structures										
Damage Covers										
Damage Structures										
Congested Structures			**2,018**	**202**	**1,796**	**89**	**1,453**	**27**		
Damage Equipment										
Conductors										
Primary Cable										
Secondary Cable										
Neutral Cable										
Racking Needed	**23,785**	**5,425**	**13,033**	**2,464**	**9,703**	**1,204**	**14,141**	**600**		
Miscellaneous										
Other			**31,832**	**6,563**	**25,379**	**3,242**	**33,788**	**1,504**		
Underground Facilities Total	**23,785**	**5,425**	**46,883**	**9,229**	**36,878**	**4,535**	**49,382**	**2,131**		

Pad Mount Transformers										
Underground Structures										
Damage Structures					**414**	**170**	**344**	**62**		
Damage Equipment										
Damage Cable										
Oil Leak										
Off Pad										
Lock/Latch/Penta										
Miscellaneous										
Other	**14**	**11**	**555**	**414**	**1,161**	**862**	**1,358**	**832**		
Pad Mount Transformers Total	**14**	**11**	**555**	**414**	**1,575**	**1,032**	**1,702**	**894**		
Streetlights										
Streetlights										
Base/Standar/Light										
Handhole/Service Box										
Service/Internal Wiring										
Access Cover										
Miscellaneous										
Other										
Streetlight Total										
Total Level IV Conditions										
Overall Total	**36,254**	**16,515**	**61,026**	**10,859**	**40,560**	**5,579**	**53,405**	**3,029**		