CENTRAL HUDSON GAS & ELECTRIC

CORPORATION

STRAY VOLTAGE TESTING

And

FACILITY INSPECTIONS

Report

On the results of the

2013 Stray Voltage Testing and Facility Inspections

February 15, 2014

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I. Background

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards Order issued on January 5, 2005 (Case 04-M-0159), with subsequent revisions issued on July 21, 2005, December 15, 2008, and March 22, 2013 (collectively referred to herein as the "Safety Standards" or "Order"), requires electric utilities in New York State to test all of their publicly accessible overhead distribution facilities, underground residential distribution facilities, overhead and underground transmission facilities, and substation fences at least once every five years. The Order also requires all non-URD underground facilities, municipally owned traffic signals and streetlights, to be tested for stray voltage annually. The Order requires utilities to inspect all utility owned electric facilities every five years.

This report describes Central Hudson's stray voltage detection program and equipment inspection program conducted in 2013.

II. Company Overview

Central Hudson Gas & Electric Corporation is a regulated transmission and distribution utility that provides electric service to approximately 300,000 customers in a service area of approximately 2,600 square miles in eight counties of New York State's Mid-Hudson River Valley. Central Hudson's service territory extends north from the suburbs of metropolitan New York City to the Capital District of Albany.

Central Hudson owns substations having an aggregate transformer capacity of 5,300 MVA. Central Hudson's electric transmission system consists of 629 pole miles of line. The electric distribution system consists of 7,181 pole miles of overhead lines and 1,475 trench miles of underground primary lines.

III. Stray Voltage Testing Program

On March 22nd, 2013, the Commission issued a revision to the Order reducing the scope of stray voltage testing. Poles (transmission and distribution), URD pads, and substation fences now require a stray voltage test once in five years. Streetlights, traffic signals, and underground structures (manholes and pullboxes) still must be tested annually. The target numbers in this report reflect the reduced scope of the testing requirements.

During the twelve-month period ending December 31, 2013, stray voltage testing was completed on Central Hudson's publicly accessible electric transmission and distribution facilities that are capable of conducting electricity as directed by the Order. Stray voltage testing was also conducted on all Company and non-Company owned metallic streetlights and traffic signals. Central Hudson also tested all publicly accessible facilities within thirty feet of a component found to have an elevated voltage in accordance with the Order.

In addition, as required by the Order, Central Hudson:

a. Immediately safeguarded and/or mitigated all stray voltages ≥ 1.0 V_{ac}. In instances where the contact voltage finding was determined to be caused by equipment not owned by Central Hudson, the area was immediately made safe and the municipalities, customers, or responsible parties associated with the premises were notified of the unsafe condition and the need for them to arrange for a permanent repair. Voltage findings that were caused by a Central Hudson owned facility were immediately safeguarded and/or mitigated. All permanent repairs were completed within 45 days, except in extreme circumstances.

b. Tested all publicly accessible structures and sidewalks within a 30 foot radius of the electric facility or streetlight where there was a voltage finding ≥ 1.0 V_{ac}.

c. Responded to and investigated all shock incidents reported by the public and mitigated positive findings.

All of the facilities that are included in Central Hudson's Stray Voltage Testing Program were visited. Of the 65,004 facilities visited, 1,024 locations did not have a stray voltage test performed because their electrically conductive appurtenances were deemed inaccessible. Inaccessible locations were defined in the Order as locations that have locked gates/fences, are located in dangerous terrain, or are located on limited access highways.

Stray Voltage Mitigation Efforts

Central Hudson identified twenty (20) locations with voltage readings greater than or equal to 1 V_{ac}. Six (6) metal apparatuses from five (5) sources were found to have contact voltage (defined as stray voltage in the Order) and were mitigated.

Two streetlights with voltage findings of 2.36 V_{ac} and 1.76 V_{ac} were located in the Poughkeepsie district. The municipality was contacted and repaired a bad neutral in one of the streetlights which mitigated the stray voltage at both locations.

One traffic signal with a voltage finding of 2.06 V_{ac} was located in the Fishkill district. The finding was the result of an improperly installed customer owned outdoor outlet that energized the earth, a metal fence, and the traffic signal. The outlet and fence were discovered during the 30 foot radius test. The customer was contacted and remediated the situation.

One distribution pole located in the Kingston district with a finding of 37.16 V_{ac} on the ground was a result of a defective secondary cable in the riser pipe. Central Hudson Crews made the necessary permanent repairs and reduced the voltage on the ground to less than 1$V_{ac.}$

Two distribution pole locations in the Kingston District had voltage findings of 2.50 V_{ac} and 2.08 V_{ac} on the guy wires. These facilities were in separate locations and had errant voltage as a result of poor ground connections. Both findings were mitigated to less than 1 V_{ac} by repairs of the ground connections and installing additional ground rods at each location.

Central Hudson was not required by the Order to perform mobile detection of its system between January 1, 2013 and December 31, 2013. Therefore, Central Hudson did not perform any mobile system scans during this period.

IV. Facility Inspection Program

The Order requires Central Hudson to visually inspect 100% of its electric facilities within five years. This equates to inspecting approximately 20% of these facilities annually.

Central Hudson visually inspects its transmission system on a five year-cycle in accordance with the Order. Prior to 2011, the distribution system visual inspections were conducted on a three-year cycle, which exceeded the requirements of the Order. Beginning in 2011, the distribution inspection cycle was transitioned to a five-year cycle. This transition was completed with the current year's testing program.

In accordance with the Order, Central Hudson uses the following severity levels to report deficiencies to the PSC and 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.

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 are 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 should be used for future monitoring purposes and planning proactive maintenance activities.

In accordance with the PSC requirements, 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. Temporary repairs that remain on the system for

more than 90 days are due to extraordinary circumstances, such as storms, require extensive repair activity, or have special requirements. Central Hudson began tracking temporary repairs during the 2009 calendar year. Results from this tracking have been compiled and described in Appendix 5 of this report.

V. Company Facilities

Based on the requirements of the Order, Central Hudson has identified approximately 58,441 individual electric facilities that require testing for the presence of contact voltage. These facilities were also inspected at the time of the stray voltage test. These facilities are broken down into four main categories as follows:

Distribution Overhead – The testing criteria for distribution overhead with an operating voltage of 34.5 kV or less, includes all utility owned or joint use wooden poles with utility electrical facilities that are located on public thoroughfares or customer property, including backyards and alleys. There are approximately 209,296 distribution pole structures in Central Hudson's service territory. 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 every 5 years. Distribution overhead facilities are included in both the stray voltage testing and inspection programs.

Underground Facilities – The testing criteria for underground facilities is comprised of subsurface structures, including above ground, pad-mounted structures. There are approximately 15,878 underground facilities that comprise Central Hudson's system. Within this total are approximately 1,238 manholes and pullboxes and approximately 14,640 pad-mounted structures. Included in the underground facilities are padmount switchgear cases, padmount transformer cases, electric utility manhole covers, submersible transformer covers, electric utility handhole covers, network vaults and grates. These facilities are included in both the contact voltage and facility inspection programs.

Streetlights and Traffic Signals – The testing criteria for street lights and traffic signals includes all metal pole streetlights, traffic signals, and pedestrian crosswalk signals located on publicly accessible thoroughfares. There are approximately 5,787 metal pole streetlights and approximately 828 traffic signals within Central Hudson's service territory. This total includes 187 metal pole streetlights owned by Central Hudson with the balance of the equipment owned by various municipalities. All contact voltage testing of streetlights is performed at night while the fixtures are energized. Pursuant to the Order, area and street lighting that is privately owned is not included in the contact voltage testing program. All Company-owned streetlights are included in the facility inspection program.

Transmission Structures – The testing criteria for transmission structures include all structures, guys, and down grounds attached to the structures. There are approximately 8,582 individual structures that comprise Central Hudson's transmission system. Transmission structures support circuit voltages of 69 kV and above. Transmission

structures as described above, with distribution underbuild, are included in this transmission category. Transmission structures are included in both the contact voltage and facility inspection programs.

Substation Fences – The testing criteria for substation fences consists of testing the fencing on the outside of the substation. There are approximately 104 substation fences in Central Hudson's territory. All substation fences are included in the contact voltage testing program.

VI. Annual Performance Targets

Central Hudson performed the required contact voltage testing and facilities inspections in accordance with the requirements set forth in the Order.

In compliance with the Order, Central Hudson has met the annual performance target for contact voltage by testing 20% of the publicly accessible electric facilities and 100% streetlights, traffic signals, manholes, and pullboxes for the twelve month period ending December 31, 2013.

In addition, Central Hudson has met the performance target for facility inspections by inspecting more than 20% of its electric facilities during the one-year period ending December 31, 2013 as defined in the Order. The results are summarized in the tables below:

People. Power. Possibilities. Central Hudson A FORTIS COMPANY	Total System Units Requiring Testing	Units Completed	Percent Completed
Distribution Facilities	47,079	50,342	106.93%
Underground Facilities	2,513	2,765	110.03%
Non-URD	1,238	1,238	100.00%
Street Lights / Traffic Signals	6,615	6,615	100.00%
Substation Fences	21	21	100.00%
Transmission (69kV and Above)	2,213	5,261	237.73%
TOTAL	58,441	65,004	111.23%

Facility Inspection Program Results

Category	Inspection Target Through 2013	Cumulative Total of Units Inspected 2010 - 2013 (Actual)
Overhead Distribution	N/A	98.66%
Overhead Transmission	N/A	89.30%
Underground (Non-URD)	N/A	86.27%
Pad-mounted Transformers	N/A	98.71%
Streetlight	100%	100%
System Total	**80%**	**98.25%**

5-Year Inspection Performance Summary

Overhead Distribution Facilities

In 2013, Central Hudson continued its transition plan from a 3 year to 5 year inspection cycle on overhead distribution facilities. This transition is now complete. There are approximately 209,296 distribution poles in Central Hudson's system.

Inspection Year	Overhead Distribution Structures Inspected	% of Overall System Inspected (Yearly)	% of Overall System Inspected (Cumulative)
2010	74,023	35.37%	35.37%
2011	41,810	19.98%	55.35%
2012	45,911	21.94%	77.29%
2013	44,733	21.37%	98.66%
2014			

Overhead Transmission Facilities

Central Hudson performed inspections on overhead transmission facilities on a five-year cycle in 2013. There are approximately 8,582 transmission poles in Central Hudson's system.

Inspection Year	Overhead Transmission Facilities Inspected	% of Overall System Inspected (Yearly)	% of Overall System Inspected (Cumulative)
2010	2,823	32.89%	32.89%
2011	1,664	19.39%	52.28%
2012	1,436	16.73%	69.01%
2013	1,741	20.29%	89.30%
2014			

Manholes and Pullboxes

Central Hudson performed inspections on manholes and pullboxes on a five-year cycle in 2013. There are approximately 1,238 manholes and pullboxes in Central Hudson's system.

Inspection Year	Manholes and Pullboxes Facilities Inspected	% of Overall System Inspected (Yearly)	% of Overall System Inspected (Cumulative)
2010	352	28.43%	28.43%
2011	251	20.27%	48.70%
2012	123	9.94%	58.64%
2013	342	27.63%	86.27%
2014			

Padmount Transformers

In 2013, Central Hudson continued its transition plan from a 3 year to 5 year inspection cycle on padmount transformers. This transition is now complete. There are approximately 14,640 padmounts in Central Hudson's electric system.

Inspection Year	Padmount Transformers Inspected	% of Overall System Inspected (Yearly)	% of Overall System Inspected (Cumulative)
2010	7,122	48.65%	48.65%
2011	3,226	22.04%	70.69%
2012	2,752	18.80%	89.49%
2013	1,350	9.22%	98.71%
2014			

Streetlights

Central Hudson performs inspections on Company-owned streetlights yearly in conjunction with contact voltage testing. As technicians perform contact voltage testing, they also perform a visual inspection of the streetlights.

Inspection Year	Streetlights Inspected	% of Overall System Inspected (Yearly	% of Overall System Inspected (Cumulative)
2010	187	100%	100%
2011	187	100%	100%
2012	187	100%	100%
2013	187	100%	100%
2014			

VII. Certifications

Pursuant to Section 7 of Appendix A of the Order, the President or Officer of each utility with direct responsibility for overseeing contact voltage testing and facility inspections shall provide an annual certification to the Commission that the utility has, to the best of his or her knowledge, exercised due diligence in carrying out a plan, including quality assurance, that is designed to meet the contact (stray) voltage testing and inspection requirements, and that the utility has:

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

- Inspected the requisite number of electric facilities.

The certifications are attached as Exhibit 1 of this report.

VIII. Analysis of Causes of Findings and Contact Voltage

All New York State utilities compile an inventory of all findings and report on the number of these findings each year. Section 1(f) of the March 22, 2013 Order defines a finding as "any confirmed voltage reading on an electric facility or streetlight ≥ 1 volt measured using a volt meter and 500 ohm shunt resistor." Section 1(c) defines stray 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."

To distinguish between dangerous contact voltage and naturally occurring voltage, field forces use a handheld oscilloscope meter to classify these different types of voltages. By looking at the total harmonic distortion of a voltage waveform and the breakdown of the harmonics, in addition to the condition of the location, the proper actions can be taken.

If contact voltage is present, then the waveform will appear as a perfect 60 Hz sinusoidal wave with 10% or less total harmonic distortion. These voltages result from a variety of conditions including: deterioration of conductors; age of equipment; exposure to the elements; and various customer related issues. These voltages should not exist on normally operating electric facilities and are considered to be contact voltages per the Order definition in Section 1(c).

Section 3(h) of the Order requires "Mitigation shall be completed on any stray voltage findings." Through the efforts of the Contact Voltage testing program, Central Hudson has been able to repair these issues and mitigate the danger associated with these elevated voltages.

When examining a naturally occurring voltage on a handheld oscilloscope, high harmonic content from different frequencies (generally 180 HZ and 300 Hz) will cause distortion in the voltage waveform. Causes of these voltages include, but are not limited to, naturally occurring neutral to earth voltages (as part of a multi-grounded WYE power system); poor soil grounding conditions; load balance between phases; long low voltage single phase circuit spurs with high current loads; capacitive coupling; and/or proximity to transmission lines. Since all of these voltage sources are considered part of a normally operating electrical distribution system, they do not require mitigation per the Order.

Although not all findings are due to contact voltage, utilities are required to report on all findings, regardless of whether or not the voltage is normal to the operating system. It has been established that 60% (14) of the findings identified in this year's testing effort are normal to the operating system, and not due to contact voltage. Inclusion of these naturally occurring voltages in the findings gives the perception that there are more potentially hazardous voltage findings than actually exist. The remaining six (6) findings that were identified as contact voltage were the result of five (5) sources. True hazardous voltages have been identified and mitigated through the stray voltage testing program.

In accordance with the PSC requirements, when a finding was discovered on an electric facility during stray voltage testing, the Company performed stray voltage testing on all publicly accessible structures and sidewalks within a minimum 30 foot radius of the electric facility or streetlight. One customer owned outdoor outlet and a metal fence were identified with contact voltage as a result of the 30-foot radius testing. Mitigation of these two potential points of public contact is described in the Stray Voltage Mitigation Effort section of this report.

IX. Harmonics Analysis

Central Hudson has continued to apply the use of harmonics analysis to determine if voltages discovered in the field are dangerous contact voltage or naturally occurring/neutral to earth voltage (NEV) common in a normally functioning electric system. After analysis, the voltages can be classified into one of the three following categories (Please note that Central Hudson mitigates all voltages in accordance with the Safety Order). The following table depicts a breakdown of findings by asset class:

Table 1 - Category Classification Criteria

Category One Voltage	**Category Two Voltage**	**Category Three Voltage**
• Voltage is $\geq 1V_{ac}$ • Sinusoidal waveform • 60 Hz dominant • Total Harmonic Distortion is <10% THD	• Voltage is $1V_{ac} - 10V_{ac}$ • Non-sinusoidal waveform • Is 180 Hz dominant • Total Harmonic Distortion is >10% THD	• Voltage is $\geq 10V_{ac}$ • Non-sinusoidal waveform • Is 180 Hz dominant • Total Harmonic Distortion is >10% THD
These voltages are considered contact voltage, which is hazardous and should not be present in a normally functioning electric system.	These voltages are considered non-hazardous Neutral to Earth Voltages and are considered part of a normally functioning electric system.	These voltages require additional field-testing and review to determine if the source is due to a system abnormality or if it is a result of a normally functioning electric system. Central Hudson attempts to mitigate these voltages at the time of discovery.

Analysis of Findings

Since 2009, the documented accounts of dangerous contact voltage has been consistently less than 0.04% of the assets tested each year on Central Hudson's electric system. The aggregate of the findings over the past five years, shows that contact voltage comprise of 12.3% (195) of the 1,574 findings during this time period (0.02% contact voltage finding rate for all the tests performed since 2009).

Contact voltage on Overhead Distribution accounts for 10.8% of the total findings. Street and Traffic Lights contact voltage account for 1.52% of the total findings and URD (Pads) contact voltage account for 0.06% (1) of the total findings over the past 5 years. There have been no findings of contact voltage in the Underground (Non-URD), Transmission, and Substation Fence groups (see Table 2).

Although there are fluctuations in the total number of category two voltage conditions, these conditions have accounted for 87.48% of the voltage findings from 2009 -2013. Category two voltages are expected to fluctuate due to weather and load conditions. These voltages can be considered part of a properly functioning multi-grounded wye electric system, and pose no threat to the public.

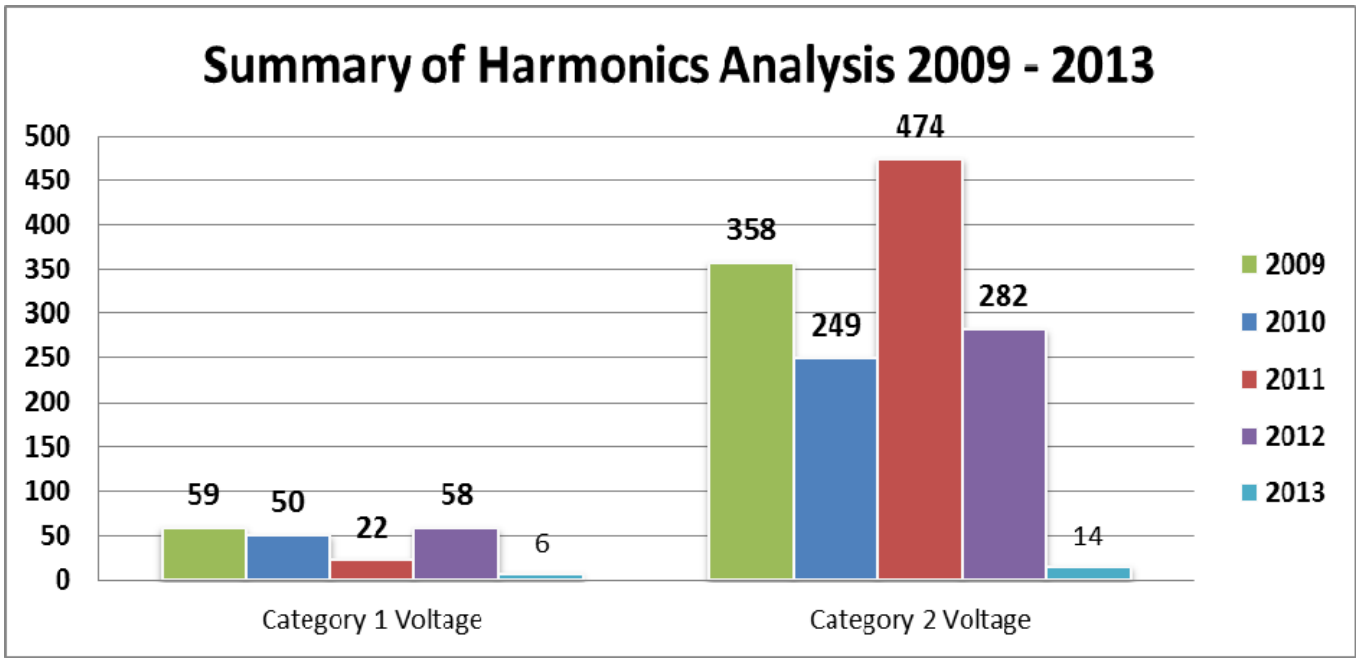
There have been no findings of naturally occurring voltage in the Underground (Non-URD), and Substation Fence groups (see Table 2). By differentiating between dangerous contact voltage and naturally occurring voltages, field crews can be effectively dispatched to mitigate dangerous voltage conditions ensuring the safety of the public while maintaining reliability of the system in a financially responsible manner.

Table 2 - Summary of Findings by Asset Class

	2009			2010			2011			2012			2013		
Asset Class	Cat. 1	Cat. 2	Cat. 3	Cat. 1	Cat. 2	Cat. 3	Cat. 1	Cat. 2	Cat. 3	Cat. 1	Cat. 2	Cat. 3	Cat. 1	Cat. 2	Cat. 3
Overhead Distribution	47	334	0	43	240	0	19	463	1	58	280	1	3	14	0
Underground (Non-URD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URD (Pads)	0	7	0	1	4	0	0	8	0	0	2	0	0	0	0
Street and Traffic Lights	12	0	0	6	0	0	3	3	0	0	0	0	3	0	0
Transmission Overhead	0	17	0	0	5	0	0	0	0	0	0	0	0	0	0
Substation Fences	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	59	358	0	50	249	0	22	474	1	58	282	1	6	14	0

Table 3 - Summary of All Findings by Asset Class

	Total Findings (2009 - 2013)		
Asset Class	Cat. 1	Cat. 2	Cat. 3
Overhead Distribution	170	1331	2
Underground (Non-URD)	0	0	0
URD (Pads)	1	21	0
Street and Traffic Lights	24	3	0
Transmission Overhead	0	22	0
Substation Fences	0	0	0
Total	195	1377	2



X. Analysis of Inspection Results

Discussion of Inspection Findings/Repairs

During the inspection process, two or more deficiencies can be reported at a single location during an inspection. Since there is no direct correlation between the numbers of deficiencies reported to the number of locations with deficiencies, this data has been tabulated separately.

The most common level of deficiencies found in Central Hudson's service territory were Level IV conditions, representing 7,195 out of the 9,470 total deficiencies found (75.98%). The three most common deficiencies all involve overhead distribution poles. These deficiencies are No Guy Guard, (3,999; 55.58% of priority level IV deficiencies), Broken Ground Moldings (1,275; 23.68% of priority level IV deficiencies), and Down Ground Damage (351, 4.88% of priority level IV deficiencies).

Currently, Central Hudson is utilizing tree trimming crews and other contract employees to help reduce the number of Level IV deficiencies. As a tree trimming crew is working in an area, the crew is installing missing guy guards to guy wires on the circuit they are working on. Targeted guy guard replacements are also being issued to contract employees. To reduce the backlog of broken ground moldings and missing pole tags, Central Hudson is utilizing contractor technicians to replace the broken ground molding while performing the stray voltage testing. Central Hudson also utilizes contractor technicians to install pole tags during inspection and testing activities.

In 2012, the transition of the transmission inspection database and field collection software migration to an improved software management system began. As part of the data migration, the previous database was evaluated for duplicate and inaccurate information. In some instances, inspections in more recent years timing created duplicate deficiency findings where a deficiency had been previously noticed. After the data was migrated to the new system, Transmission Engineering reviewed several years of past work orders for transmission repairs and line construction (including emergency repairs and storm work) to remove duplicate repair records and invalid conditions. Additionally, during the 2013 inspection year Central Hudson transmission line foremen and contract inspectors confirmed all the current deficiencies and closed completed repairs and removed invalid conditions. As a result of the review process, some conditions were downgraded to a Level IV deficiency. Due to the efforts described above, there has been a reduction in the amount of repairs that have been reported in Appendix 4 for the transmission category.

Central Hudson maintains a good response time to Level I deficiencies. There were no Level I deficiencies repaired outside of the allotted time frame in 2013.

Overhead Distribution Structures

Table of Locations with Deficiencies for 2013

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies	% Locations w/ Deficiencies Requiring Repair in 1 year
44,733	7,827	17.50%	0.96%

Breakdown of Deficiencies for 2013

Priority Rating	Number of Deficiencies	% Deficiencies Found
I	7	0.09%
II	68	0.85%
III	1,983	24.65%
IV	5,985	74.41%
Total:	8,043	100%

Overhead Transmission Facilities

Table of Locations with Deficiencies for 2013

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies	% Locations w/ Deficiencies Requiring Repair in 1 year
1,741	119	6.84%	0%

Breakdown of Deficiencies for 2013

Priority Rating	Number of Deficiencies	% Deficiencies Found
I	0	0.00%
II	0	0.00%
III	28	23.53%
IV	91	76.47%
Total:	119	100%

Manholes and Pullboxes

Table of Locations with Deficiencies for 2013

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies	% Locations w/ Deficiencies Requiring Repair in 1 year
342	23	0.07%	26.09%

Breakdown of Deficiencies for 2013

Priority Rating	Number of Deficiencies	% Deficiencies Found
I	1	2.85%
II	5	14.29%
III	11	31.43%
IV	18	51.43%
Total:	35	100%

Padmount Transformers

Table of Locations with Deficiencies for 2013

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies	% Locations w/ Deficiencies Requiring Repair in 1 year
1,350	76	5.63%	3.95%

Breakdown of Deficiencies for 2013

Priority Rating	Number of Deficiencies	% Deficiencies Found
I	2	2.47%
II	1	1.23%
III	60	74.07%
IV	18	22.23%
Total:	81	100%

Streetlights

Table of Locations with Deficiencies for 2013

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies	% Locations w/ Deficiencies Requiring Repair in 1 year
187	0	0.00%	N/A

Breakdown of Deficiencies for 2013

Priority Rating	Number of Deficiencies	% Deficiencies Found
I	0	N/A
II	0	N/A
III	0	N/A
IV	0	N/A
Total:	0	N/A

XI. Inspection Driven Reliability and Efficiency Improvement Programs

Central Hudson has recognized the opportunity to use the inspection program as a means to help improve system reliability. Operations and Engineering have deployed "micro-surveys" to be completed by contracted technicians in line with contact voltage testing and inspection surveys. These micro-surveys were added to the existing inspection survey as a line item, and completed during the regular round of testing and inspections, eliminating the need for a second mobilization. The data that is collected during the survey is then aggregated and used to make a more efficient response plan based on what the goal is for each individual micro-survey. These surveys have included inventories for cutouts, animal guards, and streetlights.

Cutouts

Porcelain cutouts can fail when exposed to the elements for long periods. Porcelain cutouts can develop cracks in the insulator which will hold water. When this crack is filled with water and exposed to freezing, the crack can expand. Over time, the constant freezing and thawing can open the crack further. When water flows through the crack, it can create a path for the electricity track, bypassing the fuse.

Prior to the 2010 inspection year, Central Hudson replaced porcelain cutouts with polymer cutouts located in the first zone of protection and/or protecting circuit segments of 500 customers or more. In 2010, a micro-survey was added to the contact voltage testing and inspection survey to confirm the cutouts were replaced and capture any that may have been missed. The data collected was aggregated and used to formulate a replacement plan in line with current operational plans and scheduled maintenance in order to avoid a second mobilization to the facility to replace the cutout(s).

Streetlights

In 2011, a micro-survey was added to inventory streetlights mounted on wooden poles (cobra heads) in the electric distribution system. These streetlights are visually inspected from the ground when contractor technicians perform a voltage test. After the survey was completed, 30,000 pole mounted streetlights were inventoried.

The micro-survey documented the head type, body type, bulb type (when applicable), bulb wattage (when applicable), width (set back style only), and decorative arm (tear drop type only). This information was stored and will be used to update the GIS system available to line crews when repairs are scheduled to ensure that the correct bulb/wattage was on the truck, thus saving a second mobilization.

Animal Guards

Central Hudson has noticed a high rate of outages caused by wildlife. In 2012, a survey of animal guards was conducted on our system to inventory what style animal guard is currently installed on transformers. This data was imported into our GIS system to show locations that needed an upgrade to a modern, more effective animal guard. A plan will

be developed to replace and/or add animal protection where it will positively impact customer reliability.

Poles

During the inspection survey, each pole is "sound tested" by contractor technicians when they perform an inspection. Using a hammer, technicians strike the pole from grade to at least four feet above grade, at least 4 times. While striking the pole with a hammer, technicians listen for audible indications of rot in the poles interior where it cannot be seen. Technicians will record the pole as "unsatisfactory" in the PDA if rot is suspected. A Central Hudson Field Supervisor will perform a site visit to confirm the preliminary assessment before recommending replacement. Central Hudson maintains a spending plan in the capital budget to replace any pole that is found to be rotten during the inspection process.

XII. Quality Assurance

Central Hudson continues to utilize an external auditor to perform its QA/QC program to review the effectiveness and accuracy of the contact voltage testing and facility inspection programs and their associated activities. The external auditor report directly to Central Hudson's Internal Auditing Department and submits audit reports simultaneously to the Internal Auditing Department and the Program Manager for review. If there are any findings, an action plan is assembled to address the concerns identified by the external auditor. These audits have resulted in specific improvements to the various processes, which have contributed toward increasing program efficiency and accuracy as well as reducing potential for future errors. The QA/QC program calls for several types of audits and for constant feedback with respect to the data collection and processing. The various audits cover personnel training, field testing and inspection procedures and practices, testing and inspection records, and field trailing audits.

For 2013, to date two audits of field-testing and inspection activities, one audit of the initial training, and one audit of test data records were completed. In addition, a comprehensive year-end audit for the 2013 records is currently being processed. The completed audits indicate that all significant activities associated with the stray voltage testing and facilities inspection programs were conducted in accordance with established protocols with no major audit findings.

XIII. Other Pertinent Information

Central Hudson continues to participate in the NYS Residential Stray Voltage Committee Activities, and through EPRI membership, continues to ensure that the best operational, construction and maintenance practices are being utilized. Central Hudson also participates with the New York State Utilities and the PSC in discussing issues and opportunities regarding both Contact (Stray) Voltage Testing and Facility Inspections.

In addition, Central Hudson participates in the IEEE P1695 Working Group on Voltages at Publicly and Privately Accessible Locations. This working group is working towards creating a guide that addresses the normal and abnormal voltages that exist at publicly and privately accessible locations as a result of the delivery and use of electrical energy (often referred to as stray voltage). The guide will focus primarily on the presence of power frequency related voltages, and will discuss definitions, causes, impacts, testing techniques, mitigation strategies, and hazard levels.

As a result of Central Hudson's involvement in the IEEE P1695 Working Group, a member of Central Hudson moderated a panel session as the panel chair at the July 2013 IEEE PES General Meeting. The panel session featured four presentations covering topics of elevated voltage testing, harmonic analysis, manhole inspections, and proper measurement techniques. As a result, two papers covering the use of harmonic analysis to identify the source of elevated voltages and an analysis of the manual testing program results in New York State have been published and are available on IEEE Xplore. Both papers were attached to the 2011 annual report as Appendix 6.

The IEEE P1695 Working Group is near completion on a guide that will be approved by the working group. By the end of 2014, the P1695 Working Group will submit the guide to the IEEE Standards Association to begin the ballot approval process to make the guide into a reference document recognized by IEEE.

Appendix 1: Stray Voltage Testing Summary – 2013

	Total System Units Requiring Testing	Units [1] Completed	Percent Completed	Units with Voltage Found (>= 1.0v)	Percent of Units Tested with Voltage (>= 1.0v)	Units Classified as Inaccessible
Distribution Facilities	47,079	50,342	106.93%	17	0.034%	456
Underground Facilities	2,513	2,765	110.03%	0	0.00%	82
Non-URD	1,238	1,238	100.00%	0	0.00%	24
Street Lights / Traffic Signals	6,615	6,615	100.00%	3	0.05%	61
Substation Fences	21	21	100.00%	0	0.00%	0
Transmission (69kV and Above)	2,213	5,261	237.73%	0	0.00%	425
TOTAL	58,441	65,004	111.23%	20	0.031%	1,024

Findings will include naturally occurring and stray voltages. Of the 20 locations that tested positive for voltage, 6 facilities were mitigated due to contact voltage and are included in this number.

[1] Stray voltage testing was underway when the revision to the Order was issued on March 22nd, 2013. Due to this, distribution poles, URD pads, and transmission poles have a higher units completed total than units required total.

Appendix 2A: Summary of Stray Voltage Findings – 2013

The table below shows Central Hudson's Stray Voltage Mitigation efforts. Of the 20 locations with findings of 1 Volt or greater, 6 facilities required mitigation to less than 1 Volt and were found to have contact (stray) voltage caused by the deterioration of conductors or broken equipment. The remaining 14 voltage findings were deemed to have been caused by a natural source and therefore did not require mitigation.

	Initial Readings				Readings after Mitigation		
	1V to 4.4V	4.5V to 24.9V	25V and Over	**Totals**	< 1 V	1V to 4.4V	4.5V and Over
Distribution Facilities	**16**	**-**	**1**	**17**	**3**	**14**	**-**
Pole	-	-	-	-	-	-	-
Ground	2	-	1	3	1	2	-
Guy	14	-	-	14	2	12	-
Riser	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Underground Facilities	**-**		**-**	**-**	**-**	**-**	**-**
Handhole / Pull box	-	-	-	-	-	-	-
Manhole	-	-	-	-	-	-	-
Padmount Switchgear	-	-	-	-	-	-	-
Padmount Transformer	-	-	-	-	-	-	-
Vault – Cover/Door	-	-	-	-	-	-	-
Pedestal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Street Lights / Traffic Signals	**3**	**-**	**-**	**3**	**3**	**-**	**-**
Metal Street Light Pole	2	-	-	2	2	-	-
Traffic Signal Pole	1	-	-	1	1	-	-
Control Box	-	-	-	-	-	-	-
Pedestrian Crossing Pole	-	-	-	-	-	-	-
Other - NOT LISTED	-	-	-	-	-	-	-
Substation Fences	-	-	-	-	-	-	-
Fence	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Transmission (69kV and Above)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Lattice Tower	-	-	-	-	-	-	-
Pole	-	-	-	-	-	-	-
Ground	-	-	-	-	-	-	-
Guy	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Miscellaneous Facilities	-	-	-	-	-	-	-
Sidewalk	-	-	-	-	-	-	-
Gate/Fence/Awning	-	-	-	-	-	-	-
Control Box	-	-	-	-	-	-	-
Scaffolding	-	-	-	-	-	-	-
Bus Shelter	-	-	-	-	-	-	-
Fire Hydrant	-	-	-	-	-	-	-
Phone Booth	-	-	-	-	-	-	-
Water Pipe	-	-	-	-	-	-	-
Riser	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-

Appendix 2B: Summary of Energized Objects – 2013

The table below shows the summary of energized objects. Of the 20 locations with findings of 1 Volt or greater, 6 of the locations required mitigation to 1 Volt or less and were found to have contact voltage caused by the deterioration of conductors, broken equipment, and/or aging equipment.

The table below has a complete breakout of findings along with distinctions between naturally occurring voltage and stray voltage discovered through the Stray Voltage Testing Program.

People. Power. Possibilities. Central Hudson A FORTIS COMPANY	Initial Readings				Voltage Type		
	1V to 4.4V	4.5V to 24.9V	25V and Over	**Totals**	Naturally Occurring	Contact (Stray) Voltage	Mitigated Locations (<1 Volt)
Distribution Facilities	**16**	**-**	**1**	**17**	**14**	**3**	**3**
Pole	-	-	-	-	-	-	-
Ground	2	-	1	3	2	1	1
Guy	14	-	-	14	12	2	2
Riser	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Underground Facilities	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Handhole/Pull Box	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Street Lights / Traffic Signals	**3**	**-**	**-**	**3**	**-**	**3**	**3**
Metal Street Light Pole	2	-	-	2	-	2	2
Traffic Signal Pole	1	-	-	1	-	1	1
Transmission (69kV and Above)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Lattice Tower	-	-	-	-	-	-	-
Ground	-	-	-	-	-	-	-
Grand Total	***19***	**-**	***1***	***20***	***14***	***6***	***6***

Appendix 3: Summary of Shock Reports from the Public – 2013

		Yearly Total
I.	**Total Shock Calls Received:**	**15**
	Unsubstantiated	0
	Normally Energized Equipment	9
	Stray Voltage:	
	Person	6
	Animal	0
II.	**Injuries Sustained/Medical Attention Received**	**1**
	Person	1
	Animal	0
III.	**Voltage Source:**	**15**
	Utility Responsibility	
	Issue with primary, joint, or transformer	1
	Secondary Joint (Crab)	0
	SL Service Line	0
	Abandoned SL Service Line	0
	Defective service line	0
	Abandoned service line	0
	OH Secondary	0
	OH Service	0
	OH Service neutral	4
	Pole	0
	Riser	0
	Other	0
	Customer Responsibility	
	Contractor damage	1
	Customer Equipment / Wiring	7
	Other Utility / Gov't Agency Responsibility	
	SL Base Connection	0
	SL Internal Wiring or Light Fixture	1
	Overhead Equipment	1
	Other	0
IV.	**Voltage Range:**	**15**
	Unrecorded/Below 1V	11
	1.0V to 4.4V	2
	4.5V to 24.9V	2
	25V and above	0

Appendix 4: Summary of Deficiencies and Repair Activity Resulting from the Inspection Process – 2013

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	**4**	**48**	**369**	4	54	440	7	50	366	1	41	215	-	38	366
Repaired in Time Frame	4	25	324	4	37	429	7	35	344	1	39	158	-	17	108
Repaired - Overdue	-	23	45	-	17	11	-	15	-	-	2	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	22	-	-	57	-	21	258
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grounding System															
Number of Deficiencies	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anchors/Guy Wire															
Number of Deficiencies	-	-	**634**	-	-	524	-	-	187	-	-	254	-	-	180
Repaired in Time Frame	-	-	536	-	-	523	-	-	151	-	-	220	-	-	58
Repaired - Overdue	-	-	98	-	-	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	36	-	-	34	-	-	122
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cross Arm/Bracing															
Number of Deficiencies	**2**	**7**	**23**	1	8	31	2	17	33	-	3	3	-	7	23
Repaired in Time Frame	2	6	16	1	8	31	2	14	24	-	3	3	-	4	7
Repaired - Overdue	-	1	7	-	-	-	-	3	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	9	-	-	-	-	3	16
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Riser															
Number of Deficiencies	**1**	-	-	-	-	-	4	4	13	-	2	1	-	-	4
Repaired in Time Frame	1	-	-	-	-	-	4	4	12	-	2	1	-	-	1
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductors															
Primary Wire/Broken Ties															
Number of Deficiencies	**27**	**8**	**80**	21	19	69	9	26	195	11	8	54	6	13	102
Repaired in Time Frame	27	4	70	21	19	69	9	21	169	11	7	52	6	6	65
Repaired - Overdue	-	4	10	-	-	-	-	5	-	-	1	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	26	-	-	2	-	7	37
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secondary Wire															
Number of Deficiencies	**2**	-	**22**	1	-	20	-	-	23	-	-	7	-	-	7
Repaired in Time Frame	2	-	18	1	-	20	-	-	23	-	-	7	-	-	4
Repaired - Overdue	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Not Repaired - Overdue	-	-		-	-	-	-	-	-	-	-	-	-	-	-

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
Neutral															
Number of Deficiencies	-	-	**22**	-	-	15	-	-	14	-	-	3	-	-	5
Repaired in Time Frame	-	-	21	-	-	15	-	-	14	-	-	3	-	-	2
Repaired - Overdue	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insulators															
Number of Deficiencies	**1**	-	**20**	1	11	12	-	6	46	-	-	4	-	3	13
Repaired in Time Frame	1	-	19	1	9	12	-	4	44	-	-	4	-	3	11
Repaired - Overdue	-	-	1	-	2	-	-	2	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pole Equipment															
Transformers															
Number of Deficiencies	-	-	**21**	-	1	17	1	4	19	-	-	9	-	-	11
Repaired in Time Frame	-	-	20	-	1	17	1	4	18	-	-	9	-	-	9
Repaired - Overdue	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cutouts															
Number of Deficiencies	-	**34**	-	-	19	-	-	5	-	-	34	-	-	-	-
Repaired in Time Frame	-	34	-	-	18	-	-	4	-	-	33	-	-	-	-
Repaired - Overdue	-	-	-	-	1	-	-	1	-	-	1	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lightning Arrestors															
Number of Deficiencies	-	-	**4**	-	-	6	-	-	14	-	-	4	-	-	2
Repaired in Time Frame	-	-	2	-	-	6	-	-	9	-	-	4	-	-	-
Repaired - Overdue	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	5	-	-	-	-	-	2
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Equipment															
Number of Deficiencies	-	-	-	-	-	-	1	4	13	-	2	1	-	-	4
Repaired in Time Frame	-	-	-	-	-	-	1	4	12	-	2	1	-	-	1
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous															
Trimming Related															
Number of Deficiencies	**4**	**25**	**1,583**	9	37	2,360	5	23	988	4	10	888	1	7	1,228
Repaired in Time Frame	4	15	1,583	9	30	2,360	5	23	988	4	10	888	1	7	1,222
Repaired - Overdue	-	10	-	-	7	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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
Other															
Number of Deficiencies	-	**5**	**28**	2	3	14	-	5	60	1	2	6	-	-	38
Repaired in Time Frame	-	4	28	2	3	14	-	5	56	1	2	6	-	-	23
Repaired - Overdue	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	4	-	-	-	-	-	15
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Overhead Facilities Total															
Total															
Number of Deficiencies	**41**	**127**	**2,806**	39	152	3,508	31	144	1,971	17	102	1,449	7	68	1,983
Repaired in Time Frame	41	88	2,637	39	125	3,496	31	118	1,864	17	98	1,356	7	37	1,511
Repaired - Overdue	-	39	169	-	27	12	-	26	-	-	4	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	107	-	-	93	-	31	472
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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	-	-	-	-	-	2	-	-	21	-	-	1	-	-	1
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Repaired - Overdue	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	21	-	-	-	-	-	1
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poles															
Number of Deficiencies	-	1	34	-	1	14	-	-	80	-	1	17	-	-	19
Repaired in Time Frame	-	-	15	-	1	8	-	-	31	-	-	9	-	-	-
Repaired - Overdue	-	1	16	-	-	6	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	49	-	-	8	-	-	19
Not Repaired - Overdue	-	-	3	-	-	-	-	-	-	-	1	-	-	-	-
Anchors/Guy Wire															
Number of Deficiencies	-	-	4	-	1	1	-	-	9	-	-	-	-	-	4
Repaired in Time Frame	-	-	1	-	1	-	-	-	3	-	-	-	-	-	-
Repaired - Overdue	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	6	-	-	-	-	-	4
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Crossarm/Brace															
Number of Deficiencies	-	-	-	-	-	4	-	-	2	-	-	2	-	-	1
Repaired in Time Frame	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	2	-	-	1
Not Repaired - Overdue	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Grounding System															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductors															
Cable															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	1	13	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	1	13	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Static/Neutral															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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
Insulators															
Number of Deficiencies	-	1	4	-	-	2	-	-	1	-	-	1	-	-	-
Repaired in Time Frame	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-
Repaired - Overdue	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Not Repaired - Overdue	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-
Miscellaneous															
Right of Way Condition															
Number of Deficiencies	-	-	1	-	-	6	-	-	3	-	-	1	-	-	2
Repaired in Time Frame	-	-	1	-	-	6	-	-	1	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	2	-	-	1	-	-	2
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other															
Number of Deficiencies	-	-	2	-	1	6	-	-	1	-	1	3	-	-	1
Repaired in Time Frame	-	-	-	-	-	4	-	-	1	-	1	-	-	-	-
Repaired - Overdue	-	-	2	-	1	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1
Not Repaired - Overdue	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Transmission Facilities Total															
Total															
Number of Deficiencies	-	2	45	-	3	35	-	-	117	-	2	25	-	-	28
Repaired in Time Frame	-	1	18	-	2	20	-	-	38	-	1	10	-	-	-
Repaired - Overdue	-	1	22	-	1	11	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	79	-	-	15	-	-	28
Not Repaired - Overdue	-	-	5	-	-	4	-	-	-	-	1	-	-	-	-

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

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	-	4	1	-	-	2	-	-	2	-	-	4	-	-	-
Repaired in Time Frame	-	3	1	-	-	1	-	-	2	-	-	4	-	-	-
Repaired - Overdue	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damaged Structure															
Number of Deficiencies	-	2	10	1	1	4	-	-	1	-	-	3	-	2	-
Repaired in Time Frame	-	-	2	1	-	4	-	-	1	-	-	3	-	-	-
Repaired - Overdue	-	2	8	-	1	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
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	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-
Repaired in Time Frame	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductors															
Primary Cable															
Number of Deficiencies	-	-	2	-	-	3	-	-	1	-	-	1	1	-	3
Repaired in Time Frame	-	-	2	-	-	3	-	-	1	-	-	1	1	-	2
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secondary Cable															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neutral Cable															
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 - Manholes and Pullboxes

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
Racking Needed															
Number of Deficiencies	-	**3**	**1**	-	-	6	-	-	6	-	-	-	-	-	-
Repaired in Time Frame	-	3	1	-	-	6	-	-	6	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous															
Other															
Number of Deficiencies	-	-	5	-	-	2	-	1	2	-	2	16	-	3	8
Repaired in Time Frame	-	-	2	-	-	2	-	1	2	-	2	16	-	2	-
Repaired - Overdue	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Underground Facilities Total															
Total															
Number of Deficiencies	-	9	19	1	1	18	-	1	12	1	2	25	1	5	11
Repaired in Time Frame	-	6	8	1	-	17	-	1	12	1	2	25	1	2	2
Repaired - Overdue	-	3	11	-	1	1	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Padmount 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	**19**	-	**1**	13	1	3	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	19	-	1	13	1	3	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Damaged Equipment															
Number of Deficiencies	-	-	**9**	-	-	45	2	-	18	-	-	19	-	-	1
Repaired in Time Frame	-	-	7	-	-	42	2	-	17	-	-	19	-	-	-
Repaired - Overdue	-	-	2	-	-	3	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cable Condition															
Number of Deficiencies	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oil Leak															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off Pad															
Number of Deficiencies	**21**	**3**	-	36	19	-	12	-	-	10	-	-	1	-	-
Repaired in Time Frame	21	3	-	36	18	-	12	-	-	10	-	-	1	-	-
Repaired - Overdue	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lock/Latch/Penta															
Number of Deficiencies	**1**	-	-	2	-	-	8	-	-	4	1	-	1	-	-
Repaired in Time Frame	1	-	-	2	-	-	8	-	-	4	1	-	1	-	-
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous															
Other															
Number of Deficiencies	-	-	**110**	1	8	160	10	-	12	-	1	45	-	1	59
Repaired in Time Frame	-	-	104	1	8	160	9	-	12	-	1	45	-	1	49
Repaired - Overdue	-	-	6	-	-	-	1	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Padmount 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 Total															
Total															
Number of Deficiencies	41	3	120	52	38	208	32	-	30	14	2	64	2	1	60
Repaired in Time Frame	41	3	112	52	36	205	31	-	29	14	2	64	2	1	49
Repaired - Overdue	-	-	8	-	2	3	1	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	-	-	-	1	-	-	-	-	-	11
Not Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Streetlights	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
Streetlight															
Base/Standard/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 - Level IV Conditions

Level IV Conditions	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	7	28	18	9	-	17	-	18	-
Grounding System	6,375	6,259	8,496	7,741	6,450	5,893	2,347	2,216	1,704	1,430
Anchors/Guy Wire	13,066	13,066	6,236	6,235	6,984	6,975	4,382	4,380	4,230	2,890
Cross Arm/Bracing	-	-	-	-	-	-	-	-	-	-
Riser	-	-	-	-	-	-	-	-	-	-
Conductors										
Primary Wire/Broken Ties	-	-	-	-	-	-	-	-	-	-
Secondary Wire	-	-	-	-	-	-	-	-	-	-
Neutral	-	-	-	-	-	-	-	-	-	-
Insulators	-	-	-	-	-	-	-	-	-	-
Pole Equipment										
Transformers	-	-	43	25	41	2	20	5	33	5
Cutouts	-	-	-	-	-	-	-	-	-	-
Lightning Arrestors	-	-	-	-	-	-	-	-	-	-
Other Equipment	-	-	-	-	-	-	-	-	-	-
Miscellaneous										
Trimming Related	-	-	-	-	-	-	-	-	-	-
Other	2,791	2,781	1,892	624	2,141	43	334	31	-	-
Overhead Facilities Total	22,239	22,113	16,695	14,643	15,625	12,913	7,100	6,632	5,985	4,325
Transmission Facilities										
Towers/Poles										
Steel Towers	-	-	2	-	7	1	-	-	6	-
Poles	54	14	186	108	55	21	5	2	33	2
Anchors/Guy Wire	90	23	126	27	5	-	-	-	4	-
Crossarm/Brace	1	1	19	12	1	-	1	-	34	2
Grounding System	-	-	-	-	-	-	-	-	-	-
Conductor										
Cable	-	-	-	-	-	-	-	-	-	-
Static/Neutral	-	-	-	-	-	-	-	-	2	-
Insulators	1	0	2	2	-	-	9	-	2	-
Miscellaneous										
Right of Way Condition	-	-	7	2	2	-	-	-	2	-
Other	8	1	6	1	-	-	6	-	8	-
Transmission Facilities Total	154	39	41	15	70	22	21	2	91	4

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Level IV Conditions

Level IV Conditions	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
Underground Facilities										
Underground Structures										
Damaged Cover	3	3	5	3	1	-	2	1	3	-
Damaged Structure	4	4	-	-	-	-	-	-	-	-
Congested Structure	-	-	-	-	-	-	-	-	-	-
Damaged Equipment	-	-	2	2	-	-	3	-	-	-
Conductors										
Primary Cable	35	35	-	-	3	-	2	-	-	-
Secondary Cable	-	-	-	-	-	-	-	-	-	-
Neutral Cable	-	-	-	-	-	-	-	-	-	-
Racking Needed	7	5	-	-	-	-	-	-	-	-
Miscellaneous										
Other	10	8	43	25	52	22	13	5	15	1
Underground Facilities Total	59	55	50	30	56	22	20	6	18	1
Padmount Transformers										
Underground Structures										
Damaged Structure	-	-	2	1	-	-	-	-	-	-
Damaged Equipment	-	-	-	-	-	-	-	-	-	-
Damaged Cable	-	-	-	-	-	-	-	-	-	-
Oil Leak	-	-	-	-	-	-	-	-	-	-
Off Pad	-	-	-	-	-	-	-	-	-	-
Lock/Latch/Penta	-	-	-	-	-	-	-	-	-	-
Miscellaneous										
Other	198	198	407	48	94	1	343	13	18	-
Pad Mount Transformer Total	198	198	409	49	94	1	343	13	18	-
Streetlights										
Streetlight										
Base/Standard/Light	-	-	-	-	-	-	-	-	-	-
Handhole/Service Box	-	-	-	-	-	-	-	-	-	-
Service/Internal Wiring	-	-	-	-	-	-	-	-	-	-
Access Cover	-	-	-	-	-	-	-	-	-	-
Miscellaneous										
Other	-	-	-	-	-	-	-	-	-	-
Streetlight Total	-	-	-	-	-	-	-	-	-	-
Total Level IV Conditions										
Overall Total	22,650	22,405	17,557	14,896	15,845	12,958	7,484	6,653	6,112	4,330

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Year	Priority Level / Repair Expected		Deficiencies Found (Total)	Repaired In Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired - Overdue
2009	I	Within 1 week	82	82	0	0	0
	II	Within 1 year	141	98	43	0	0
	III	Within 3 years	2,990	2,775	210	0	5
	IV	N/A	22,650	22,405	N/A	245	N/A
2010	I	Within 1 week	92	92	0	0	0
	II	Within 1 year	194	163	31	0	0
	III	Within 3 years	3,769	3,738	27	0	4
	IV	N/A	17,557	14,896	N/A	2,661	N/A
2011	I	Within 1 week	63	62	1	0	0
	II	Within 1 year	145	119	26	0	0
	III	Within 3 years	2,130	1,943	0	187	0
	IV	N/A	15,845	12,958	N/A	2,887	N/A
2012	I	Within 1 week	32	32	0	0	0
	II	Within 1 year	108	102	5	0	1
	III	Within 3 years	1,563	1,455	0	108	0
	IV	N/A	7,484	6,653	N/A	831	N/A
2013	I	Within 1 week	10	10	0	0	0
	II	Within 1 year	74	40	0	34	0
	III	Within 3 years	2,082	1,562	0	520	0
	IV	N/A	6,112	4,330	N/A	1,782	N/A

Appendix 5: Temporary Repairs

The process of tracking temporary repairs throughout all divisions in Central Hudson is a complex one requiring interfacing of multiple systems and coordination of several organizations. Currently, Central Hudson has developed an automated system to track temporary repairs and produce reports for line crews and supervisors to better manage the process. The system has automated most of the work associated with tracking temporary repairs, but manual intervention is still required. Central Hudson continues to utilize contact voltage technicians to update the inventory annually.

Overall, Central Hudson has completed permanent repairs on 55 out of 70 locations (78.57%). Of the repairs completed, 39 were completed within the 90 day time frame stated in the Order (70.90%). The remaining open orders (15) are being assessed or scheduled for work. Currently, 7 of the open temporary repairs are over the 90 day time frame.

Many factors contributed to temporary repairs being completed outside of the 90 day window. In addition, the process of getting a work order created, estimate generated, and obtaining highway permits can cause the permanent repair to be completed outside of the 90 day time frame. Similar to deficiencies identified during inspections, qualified personnel are prioritizing temporary repairs based on circuit reliability and public safety

Once a temporary condition is identified, the Company re-evaluates the location and determines if additional safeguards are required to protect the interest of the public, and does so immediately. Other conditions outside of Central Hudson’s control have also caused delays such as; weather, field conditions, equipment rentals, and available load capacity due to switching requirements.

Exhibit 1: Certifications

CERTIFICATION
[STRAY VOLTAGE TESTING]

STATE OF NEW YORK)
) ss.:
COUNTY OF DUTCHESS)

Paul E. Haering, on this 14th day of February 2014, certifies as follows:

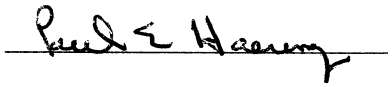
1. I am the Vice President, Engineering & System Operations of Central Hudson Gas and Electric (the "Company"), and in that capacity I make this Certification for the annual period ending December 31st, 2013 based on my knowledge of the testing program adopted by the Company in accordance the Public Service Commission's Orders issued and effective January 5, July 21, 2005, December 15, 2008, and March 22,2013 in Case 04-M-0159 (collectively the "Orders"), including the Quality Assurance Program filed by the Company with the Commission.

2. In accordance with the requirements of the Orders, the Company developed a program designed to test (i) all of the publicly accessible electric facilities owned by the Company ("Facilities") and (ii) all streetlights located in public thoroughfares in the Company's service territory ("Streetlights"), as identified through a good faith effort by the Company, for stray voltage (the "Stray Voltage Testing Program").

3. I am responsible for overseeing the Company's Stray Voltage Testing Program and in that capacity I have monitored the Company's Stray Voltage Testing Program during the twelve months ended December 31st, 2013 (the "Twelve-Month Period").

4. I hereby certify that, to the best of my knowledge, information and belief, the Company has implemented and completed its Stray Voltage Testing program for the Twelve Month Period. Except for untested structures that are identified as temporarily inaccessible in the Company's Annual Report, submitted herewith, the Company is unaware of any Facilities or Streetlights that were not tested during the Twelve-Month Period.

5. I make this certification subject to the condition and acknowledgment that it is reasonably possible that, notwithstanding the Company's good faith implementation and completion of the Stray Voltage Testing Program, there may be Facilities and Streetlights that, inadvertently, may not have been tested or were not discovered or known after reasonable review of Company records and reasonable visual inspection of the areas of the service territory where Facilities and Streetlights were known to exist or reasonably expected to be found.



Sworn to before me this 4th day of February, 2014

Notary Public: Maureen M. Kverek

CERTIFICATION
[FACILITY INSPECTIONS]

STATE OF NEW YORK)
) ss.:
COUNTY OF DUTCHESS)

Paul E. Haering, on this 15th day of February 2014, certifies as follows:

1. I am the Vice President, Engineering & System Operations of Central Hudson Gas and Electric (the "Company"), and in that capacity I make this Certification for the annual period ending December 31st, 2013 based on my knowledge of the inspection program adopted by the Company in accordance with the Public Service Commission's Orders issued and effective January 5, July 21, 2005, December 15, 2008, and March 22,2013 in Case 04-M-0159 (collectively the "Orders"), including the Quality Assurance Program filed by the Company with the Commission.

2. The Company has an inspection program that is designed to inspect all of its electric facilities on a five-year inspection cycle, as identified through a good faith effort by the Company ("Facilities"), in accordance with the requirements of the Orders (the "Facility Inspection Program").

3. I am responsible for overseeing the Company's Facility Inspection Program and in that capacity I have monitored the program during the twelve months ended December 31st, 2013 (the "Twelve-Month Period").

4. I hereby certify that, to the best of my knowledge, information and belief, the Company has implemented and completed its Facility Inspection Program to inspect approximately 20 % of its Facilities during calendar year 2013, in order to comply with the five-year inspection cycle required under the Orders.

Paul C Haering

Sworn to before me this 14th day of February, 2014

Notary Public: Maureen M. Kverek