# **Orange and Rockland Utilities, Inc.**

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# STRAY VOLTAGE TESTS AND FACILITY INSPECTIONS

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Report on the results of stray voltage tests and facility inspections for the annual period ending December 31, 2012

February 15, 2013 Pearl River, New York

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# I. <u>Background</u>

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards issued on January 5, 2005 (Case 04-M-0159), with subsequent revisions issued on July 21, 2005 and December 15, 2008<sup>1</sup> ("Safety Standards"), require electric utilities in New York State to stray voltage test annually all of their publicly accessible electric facilities owned by the Company and all publically accessible metallic street light and traffic signal poles located in public thoroughfares in the Company's service territory. The Safety Standards also requires the Company to inspect their electric facilities every five years.

This Report describes the stray voltage detection program and equipment inspection program Orange and Rockland Utilities, Inc. ("O&R" or the "Company") conducted in 2012.

# II. <u>Company Overview</u>

O&R is an investor-owned utility that provides electric service to approximately 224,700 customers in a service area of approximately 1,000 square miles within Rockland County and parts of Orange and Sullivan Counties, New York. The Company operates an electric transmission and distribution ("T&D") system that includes 198 distribution circuits with approximately 2,951 overhead circuit miles and 1,544 conductor miles of underground cable, nearly 300 transmission circuit miles, 43 distribution substations, 2 distribution switchyards, 6 transmission substations, 4 transmission/distribution substations, 6 transition structures located in 3 transition yards and 4 transmission switchyards. The Company also owns the transmission interconnections to 11 substations for single industrial customers.

# III. Stray Voltage Testing Program

#### Testing personnel

O&R conducted separate stray voltage test programs for its T&D system. Non-Company labor (i.e., contractors), selected through O&R's bid selection process, was used to perform the test work within each program.

➢ Equipment

To test for stray voltage, the contractor's inspectors used HD Electric Company LV-S-5 Direct Contact Low Voltage Detectors. This HD device is an independently

<sup>&</sup>lt;sup>1</sup> Case 04-M-0159 – *Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems*, Order Instituting Safety Standards (issued January 5, 2005), Order on Petitions for Rehearing and Waiver (issued July 21, 2005), Order Adopting Changes to Electric Safety Standards (issued December 15, 2008) ("December 15, 2008 Order").

certified low voltage AC test probe.<sup>2</sup> These probes were used to detect AC voltage on publicly accessible, conductive equipment or apparatus.

➢ <u>Training</u>

O&R trains the contractor personnel on the contact voltage testing and program requirements. The participants include the contractor's planners, field supervisors and administrative staff assigned to O&R's project. Subsequently, the contractor is required to train new personnel. Prior to the start of annual testing, all contractor personnel are required to attend a one day refresher course. The initial two day training program and refresher course include a review of:

- The Safety Standards;
- Company policies and procedures;
- Personal protective equipment;
- Scope of the work for stray voltage testing;
- Completing the testing form;
- Data entry process; and
- Hand-held devices and laptop requirements (increases data entry efficiency).
- Stray Voltage Testing

During the annual period ended December 31, 2012, O&R conducted stray voltage testing of all of its publicly accessible transmission and distribution facilities that are capable of conducting electricity and all Company and non-Company owned metallic streetlight and traffic signal poles. The structures tested and testing results are set forth in Appendix 1, Stray Voltage Testing Summary, of this Report.

In accordance with the Safety Standards, O&R:

- a. Immediately safeguarded and /or mitigated all voltage findings  $\geq 1.0$  volt. In instances where the stray voltage finding was determined to be caused by customer-owned equipment, the area was immediately made safe and the customer or responsible person associated with the premises was notified of the unsafe condition and the need for the customer to arrange for a permanent repair. In instances where voltage findings were determined to be caused by a utility-owned facility, the area was immediately safeguarded and/or the condition was mitigated. All permanent repairs were made within 45 days; and
- b. Tested all publicly accessible structures and sidewalks within a 30 foot radius of the electric facility or streetlight where there was a stray voltage finding  $\geq$  1.0 volt.

<sup>&</sup>lt;sup>2</sup> William J. McNulty, P.E. completed the testing and certification process for the HD Electric Company. The HD device is certified to detect AC voltage within a range of 5 volts to 600 volts.

There are 170,736 structures that comprise O&R's T&D system and 2,025 noncompany owned metallic street light and traffic signal poles that require stray voltage testing. Of these structures, 45,080 structures did not require stray voltage testing for one or more of the following reasons:

- Wood poles that have no attached appurtenances capable of conducting electricity;
- Wood poles with electrically conductive appurtenances that are not accessible to the public (pre-wired wood);
- The facility is enclosed in fiberglass (non-conductive materials);
- The facility is de-energized; and/or
- The facility is deemed inaccessible to the public.

Inaccessible facilities include:

- a. <u>Locked Gate/Fence</u> Poles 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. <u>Dangerous Grades</u> Poles located on cliffs and other dangerous grades are generally inaccessible to Company personnel and are approached only under urgent circumstances. The performance of stray voltage testing would constitute an unacceptable risk to the employee.
- c. <u>Company Property</u> Poles located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
- d. <u>Vaults</u> Structures located inside buildings. These structures are accessible only to Company and building maintenance personnel.
- e. <u>Limited Access Highway Facilities</u> Structures located on highways, exit and entrance highway ramps. The performance of stray voltage testing would constitute an unacceptable risk to the employee.

In accordance with the Commission's December 15, 2008 Order, O&R was not required to perform mobile testing during the annual period ended December 31, 2012 because no city with a population of at least 50,000 is located in the Company's service area and the Company does not have an underground network system where mobile testing is effective.

# IV. Facility Visual Inspection Program

O&R conducted separate visual inspection programs for its T&D system. Contractors were used to perform the majority of the inspection work within each program.

The Safety Standards require O&R to visually inspect approximately 20% of its facilities annually, resulting in 100% inspection of its electric facilities every five years.

O&R visually inspects its distribution system on a five-year cycle, as prescribed by the Safety Standards and inspects its transmission system annually.

➢ <u>Training</u>

O&R trains the contractor personnel on the visual inspection program requirements. The participants include the contractor's planners, field supervisors and administrative staff assigned to O&R's project. Subsequently, the contractor is required to train new personnel. Prior to the start of annual testing, all contractor personnel are required to attend a one day refresher course. The initial two day training program and refresher course include a review of:

- The Safety Standards;
- Company policies and procedures;
- Personal protective equipment;
- Scope of the work for visual inspections;
- Completing the visual inspection form;
- Data entry process; and
- Hand-held devices and laptop requirements (Increases data entry efficiency).

# Inspection Findings

In accordance with the Safety Standards, O&R classifies defects found on inspection by the following severity levels to establish priority for repairs and scheduling:

- <u>Level I</u> 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.
- <u>Level II</u> Repair within one year. A Level II deficiency is likely to fail prior to the next inspection cycle and represents a threat to safety and / or reliability should a failure occur prior to repair.
- <u>Level III</u> 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.
- <u>Level IV</u> 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 should be used for future monitoring purposes and planning proactive maintenance activities.

Appendix 4, Summary of Deficiencies and Repair Activity Resulting from the Inspection Process, contains the following information:

- Deficiencies found;
- Permanent repair actions taken by year;
- Whether the repair was completed within the required timeframe; and
- And the number of deficiencies awaiting repair.

The information is provided on a yearly basis by priority level and by equipment groupings.

# V. <u>Stray Voltage Testing and Inspection Program Facilities</u>

- Structure Categories There are 170,736<sup>3</sup> structures that comprise O&R's T&D system and 2,025 non-Company owned street lights and traffic signals. The Company facilities are broken down into the following four main categories:
- Distribution Overhead There are 133,381 distribution pole structures in O&R's territory. These distribution overhead facilities are included in both the stray voltage and inspection programs. The stray voltage testing criteria include all publicly accessible utility-owned or joint-use wooden poles with utility electrical facilities located on public thoroughfares or customer property, including backyards or alleys. Stray 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 Facilities There are 30,186 underground facilities in O&R's system. These facilities are included in both the stray voltage (with the exception of fiberglass hand hole covers) and inspection programs. The stray voltage testing criteria include subsurface structures and above ground, pad-mounted structures. Included in the subsurface structures are electric utility manhole covers, submersible transformer covers and electric utility hand hole covers. Included in the above ground structures are pad mount switchgear enclosures and transformers.
- Street Lights and Traffic Signals Of the 2,522 metallic street light poles and traffic signals within O&R's service territory, 497 are Company-owned street lights. The remaining street lights and traffic signals are owned by municipalities. All metallic street light and traffic signal poles are included in O&R's stray voltage testing program. The Company-owned street lights are included in the facility inspection program. Privately owned street lighting is not included in the stray voltage testing program, as per the Safety Standards. The stray voltage testing criteria include all metallic street light poles, traffic signals, and pedestrian crosswalk signals located on publicly accessible thoroughfares. The large majority of street lights in O&R's service area are mounted on wooden poles, and do not require stray voltage testing

<sup>&</sup>lt;sup>3</sup> During calendar year 2012, O&R discovered that 278 underground structures inadvertently were not included in the data extract at the commencement of the testing cycle. Therefore, O&R did not test these structures during 2012. As a result of this discovery, O&R tested these structures during January and February 2013 and identified no stray voltage conditions.

because their electrically conductive surfaces are not accessible to the public. All stray voltage testing of street lights is performed at night while the fixtures are energized.

Substation Fences and Transmission Structures – There are 69 substation fences and 6,603 individual poles and towers that comprise O&R's overhead transmission system. Transmission structures support circuit voltages of 34.5 kilovolts and greater. Transmission poles with distribution under build are included in this transmission category. All transmission structures are included in both the stray voltage testing and facility inspection programs. The stray voltage testing criteria includes all structures, guys, and down leads attached to the structures.

# VI. <u>Annual Performance Targets</u>

O&R performed the required stray voltage testing and facility inspections in accordance with the requirements and performance mechanism targets set forth in the Safety Standards.

In compliance with the Safety Standards, O&R has met the annual performance target for stray voltage testing of 100% of its publicly accessible electric facilities and street lights and traffic signals for the annual period ended December 31, 2012. The structures tested and testing results are set forth in Appendix 1, Stray Voltage Testing Summary, of this Report.

In compliance with the Safety Standards, O&R has met the performance target for inspection of 20% of its electric facilities for the annual period ending December 31, 2012. The results are summarized in the below tables.

# **Inspection Performance Summary**

Inspection Year	Number of Transmission and Distribution Structures Inspected in 2012	% of Transmission and Distribution Structures Inspected in 2012	Cumulative % of Transmission and Distribution Structures Inspected During 5-Year Cycle 2010 – 2014
2012	39,581	23%	75%

#### 170,736 Total O&R Transmission and Distribution Structures

Inspection Year	Number of Overhead Distribution Structures Inspected in 2012	% of Overhead Distribution Structures Inspected in 2012	Cumulative % of Overhead Distribution Structures Inspected During 5-Year Cycle 2010 – 2014
2012	27,189	20%	68%

# 133,381 Total Overhead Distribution Structures

#### 6,672 Total Overhead Transmission Structures

Inspection Year	Number of Overhead Transmission Structures Inspected in 2012	% of Overhead Transmission Structures Inspected in 2012	Cumulative % of Transmission Structures Inspected During 5-Year Cycle 2010 – 2014
2012 <sup>4</sup>	6,672 <sup>5</sup>	100%	300%

# **15,013 Total Underground Structures**

Inspection Year	Number of Subsurface Structures Inspected in 2012	% of Subsurface Structures Inspected in 2012	Cumulative % of Subsurface Structures Inspected During 5- Year Cycle 2010 – 2014
2012	1,2736	8%	17%

# 15,173 Total Pad Mount Transformers

Inspection Year	Number of Pad-mounted Equipment Inspected in 2012	% of Pad-mounted Equipment Inspected in 2012	Cumulative % of Pad-mounted Equipment Inspected During 5-Year Cycle 2010 - 2014
2012	4,591	30%	99%

<sup>&</sup>lt;sup>4</sup> O&R visually inspects the transmission system annually.
<sup>5</sup> The total includes 69 substation fences.
<sup>6</sup> The majority of O&R subsurface facilities are hand holes. O&R visually inspected the majority of the hand holes in 2009. The hand holes are due for re-inspection in 2014.

# <u>497 Total O&R Street Lights<sup>7</sup></u>

Inspection Year	Number of Street Lights Inspected in 2012	% of Street Lights Inspected in 2012	Cumulative % of Street lights inspected during 5-Year Cycle 2010 – 2014
2012	2	.4%	25%

## VII. <u>Certifications</u>

Pursuant to Section 7 of the Safety Standards, the president or officer of each utility with direct responsibility for overseeing stray 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 stray voltage testing and inspection requirements, and that the utility has:

- Tested all of its publicly accessible electric facilities and street lights, as referred to in the body of this Report; and
- Inspected the requisite number of electric facilities.

The certifications are attached as Exhibit 1of this Report.

# VIII. <u>Results of Stray Voltage Tests and Causes of Findings of Stray Voltage</u>

Of the 170,736 electrical structures that comprise O&R's T&D system and 2,025 non-Company owned equipment, 129,364 stray voltage tests were performed as part of its stray voltage-testing program in its service territory for 2012. The balance of electrical structures were not tested because the facilities are not accessible to the public or are fiberglass structures and wood poles that do not have metal-attached appurtenances capable of conducting electricity.

<sup>&</sup>lt;sup>7</sup> There are 2,522 metallic street lights and traffic signals. O&R does not own traffic signals. Of the 2,522 street lights and traffic signals, 497 are Company owned street lights. In 2011 O&R reported 549 Company-owned streetlights. Field verification in 2012 determined that 52 structures were inadvertently reported as Company-owned streetlights.

Structure Type	Cause of Voltage	Voltages Found ≥ 1 Volt
Distribution Pole	Defective wiring/equipment and induced voltage	17
Transmission Structure	Neutral to earth voltage on a ground rod	1

The chart below describes all Findings  $\geq 1.0$  volt identified and mitigated.<sup>8</sup>

Seventeen voltage findings were identified on the overhead distribution system and 1 voltage finding on the transmission system. All 18 voltage findings = > 1 volt were mitigated.

Of the 18 voltage findings = />1 volt identified, O&R's investigation procedure determined that stray voltage was identified on 13 poles. These 13 stray voltage findings were cause by defective wiring or equipment. The remaining 5 voltage findings were deemed induced voltages and/or neutral to earth voltage. The list and voltage finding descriptions can be found in Appendix 2, Summary of Energized Objects, of this Report.

O&R analyzed the testing results of 2008 through 2012 and determined that the predominant cause of stray voltage findings was insufficient bonding on ground and guy wires. As a result, O&R has enhanced its quality assurance and control measures by increasing the number of field audits to ensure that the system is built to engineering standards. In addition, O&R will provide training to its construction crews targeting the specifications related to bonding.

In accordance with the Safety Standards, when a finding was discovered on an electric facility or streetlight during stray voltage testing, the Company stray voltage tested all publicly accessible structures and sidewalks within a minimum 30 foot radius of the electric facility or streetlight. Of the 18 findings, the Company identified no near-by structures with voltage.

# IX. Inspections Results and Analysis

Of the 170,736 electrical structures that comprise O&R's T&D system, 39,581 (23%) were inspected during 2012. The charts below summarize the results of these inspections.

<sup>&</sup>lt;sup>8</sup> Section 1(f) of the Safety Standards defines a Finding as "[a]ny 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 as "[v]oltage 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."

# **Overhead Distribution Structures**

Table of Locations with Deficiencies			
Locations Inspected Locations w/ Deficiencies % Locations w/ Deficiencies			
27,189	8,219	30%	

#### **Breakdown of Deficiencies**

<b>Priority Rating</b>	Number of Deficiencies	% Deficiencies Found
1	11	0.1%
2	891	9%
3	1,895	19%
4	7,079	72%
Total	9,876	100%

# **Overhead Transmission Structures**

#### Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
6,603	2,192	33%

Di cunaonin of Deficiencies			
<b>Priority Rating</b>	Number of Deficiencies	% Deficiencies Found	
1	0	0	
2	0	0	
3	98	4%	
4	2,321	96%	
Total	2,419	100%	

# **Breakdown of Deficiencies**

## **Underground Facilities**

Table of Locations with Deficiencies

	Tuere of Becurions with Befre	tentetes
Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
1,127	18	1%

# Breakdown of Deficiencies

<b>Priority Rating</b>	Number of Deficiencies	% Deficiencies Found
1	8	44%
2	3	17%
3	6	33%
4	1	6%
Total	18	100%

# Pad-mount Transformers

#### Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
4,591	217	5%

#### Breakdown of Deficiencies

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	188	87%
2	0	0%
3	0	0%
4	29	13%
Total	217	100%

#### <u>Streetlights</u>

#### Table of Locations with Deficiencies

<b>Locations Inspected</b>	Locations w/ Deficiencies	% Locations w/ Deficiencies
2	0	0%

	Di canaown of Deficiencies											
<b>Priority Rating</b>	Number of Deficiencies	% Deficiencies Found										
1	0	0%										
2	0	0%										
3	0	0%										
4	0	0%										
*Total	0	0%										

#### Breakdown of Deficiencies

#### Priority 1 Conditions

In 2012, O&R visually inspected 39,581 structures and identified 207 Priority 1 conditions. The 11 Priority 1 conditions identified on the overhead system were leaking transformers, tree limbs leaning on the primary wire, and damaged equipment. The 196 Priority 1 conditions identified on the underground system were primarily pad mount leaking transformers, pad mount transformers dislocated from their base, units with corroded exteriors, damaged locking equipment and cracked hand hole covers. No Priority 1 conditions were identified on the transmission system.

## Priority 2 Conditions

In 2012, 894 Priority 2 conditions were identified on the T&D system. There were no Priority 2 conditions identified on the transmission system. The majority of the Priority 2 conditions on the distribution system are rungs on poles located below 8'-0" and the remaining conditions are tree trimming issues, conductor conditions, and damaged equipment, such as, broken guy wires, broken ground wires, broken cross arms, broken risers, and damaged covers.

# Priority 3 Conditions

In 2012, 1,999 Priority 3 conditions were identified on the T&D system. There were 98 defects identified on the transmission system and 1,901defects identified on the distribution system. The majority of the Priority 3 conditions on the transmission system are woodpecker and insect damage. The remaining conditions pertain to vegetation/right-of –way conditions, grounding and anchors/guy wire conditions. Of the 1,901 Priority 3 conditions identified on the distribution system the majority are anchors and guy wire conditions, grounding conditions, conductor conditions, broken tie wires, tree trimming issues and damaged covers.

In an effort to reduce the Priority 2 and Priority 3 conditions, O&R continues to review and revise its construction standards and specifications. O&R continuously seeks methods to improve quality assurance and control so that new construction is built to specification and NESC compliance. O&R's future distribution line upgrades, capital improvements and defective pole replacement program should result in a reduction in the number of Priority 2 and Priority 3conditions during future inspection cycles.

# X. Quality Assurance and Quality Control

O&R's Quality Assurance and Compliance Department is responsible for the implementation of the Company's Electric Quality Assurance Program ("Electric QA Program"). In addition to verifying compliance with the requirements of the Safety Standards, the Company's Electric QA Program is designed to promote the health and safety of the public, the reliable and economical operation of the Company's electric system, compliance with applicable electric codes and regulations, and utilization of Company resources in an efficient manner.

The O&R Electric QA Program also includes a Corrective Action Documentation and Trending procedure.<sup>9</sup> The purpose of this procedure is to define the process by which Quality Assurance and Compliance maintains a corrective action database and trends discrepancies identified by the Electric QA Program. O&R personnel implementing the Electric QA Program are independent from the Electric Operations and Electric

<sup>&</sup>lt;sup>9</sup> Details on the O&R Electric QA Program and the Corrective Action Documentation were included with the Company's February 18, 2005 filing with the Commission in Case 04-M-0159.

Engineering Groups and the Company personnel responsible for the implementation of the Stray Voltage Testing and Visual Inspection Programs.

Quality Assurance ("QA") personnel conducted a review of the Stray Voltage Testing and Visual Inspection programs during 2012. QA performed stray voltage testing and visual inspection on a selective sample of previously tested and inspected Company and municipal streetlights, overhead and underground distribution facilities and transmission structures to verify testing and inspection of equipment and the accuracy of data and records. QA conducted announced and unannounced field observations of field personnel to verify that tests were performed on all required structures. QA found the testing and inspections effectively performed and producing results consistent with the Electric QA Programs' objectives.

## 2012 Quality Assurance and Quality Control Results

The Company's Electric QA Program selectively sampled and retested 879 distribution and overhead transmission structures. This statistically significant sample size exceeds the 800 units required by the latest version of ANSI Z1.4 (MIL-STD-105D) for the determination of a normal sample size for a unit population of 150,001 to 500,000. The sample selection was distributed across the various structure types.

Category	Number of Structures Sampled	Percentage of Sample Size
Overhead Distribution	402	46%
Underground Distribution	215	24%
Street Lights/Traffic Signals	194	22%
Substation Fences	15	2%
Overhead Transmission	53	6%
Total	879	100%

# 879 Structures Sampled

Of the 879 structures selected, QA identified no stray voltage conditions during retesting and the re-inspections verified the visual inspection results reported by the contractor.

# XI. Other Pertinent Information

# Reports from the Public

As set forth in Appendix A to this Report, during 2012, O&R received 28 reports from customers regarding a stray voltage or shock hazard. In compliance with the Safety Standards, O&R responded, investigated and mitigated positive findings of shock incidents reported by the public.

Of the 28 incidents that were reported to O&R, 22 cases were substantiated and 6 incidents proved to be unsubstantiated. Of the 22 substantiated cases, 12 were attributable to O&R system equipment and 10 were due to non-Company equipment.

Of the 12 cases attributable to O&R system equipment, 8 were on the overhead system, 1 on the sub transmission system, 1 on the underground system and 2 on the gas system. Two defects pertained to a primary wire, 1 to service wires, 2 were due to equipment malfunctions, 5 to neutral wires and the remaining 2 were related to voltage on gas tracer wires. The 10 cases attributable to other parties were a result of faulty customer–owned equipment/wiring and contractor damage.

#### Stray Voltage Initiatives

O&R has worked and communicated with the PSC staff on issues attendant with the implementation of the Safety Standards. O&R continues to participate in joint meetings with the other New York utilities and PSC staff to seek best practices, employ lessons learned, and promote a high degree of consistency in the implementation of the Safety Standards requirements.

#### Temporary Repairs

In accordance with the Safety Standards, when a temporary repair is located during inspection or performed by the Company, the Company exercised its best efforts to make a permanent repair of the facility within 90 days. Temporary repairs that remain on the system for more than 90 days are generally due to extraordinary circumstances, e.g., storms that require extensive repair activity, equipment outage not available, or customer work required. The Company has completed all temporary repairs identified during the 2012 inspection cycle. Therefore, there are no exceptions to be reported.

Stray	Voltage	Testing	Summary
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Orange & Rockland Utilities, Inc. Data as of 12/31/12	Total System Units Requiring Testing	System Units Requiring Units Completed Completed		Units with Voltage Found (>= 1.0v)	Percent of Units Tested with Voltage (>= 1.0v)	*Units Classified as Inaccessible
Distribution Facilities	101,890	101,890	100.00%	17	0.02%	87
Underground Facilities	18,324	18,324	100.00%	0	0.00%	68
Street Lights / Traffic Signals	2,504	2,504	100.00%	0	0.00%	18
Substation Fences	69	69	100.00%	0	0.00%	0
Transmission	6,577	6,577	100.00%	1	0.00%	0
TOTAL	129,364	129,364	100.00%	18	0.02%	173

\*Note: Structures classified as inaccessible are defined on page 5, of this Report.

# Summary of Energized Objects

	nitial Readin	gs		Readin	tigation		
	1-4.4V	4.5-24.9V	>25V	Totals	<1V	1V-4.4V	>4.5V
Distribution Facilities	11	4	2	17	17		
Pole	2	1		3	3		
Ground	6		1	7	7		
Guy	2	1		3	3		
Riser		2	1	3	3		
Other	1			1	1		
Underground Facilities							
Service Box							
Manhole							
Padmount Switchgear							
Padmount Transformer							
Vault-Cover/Door							
Pedestal							
Other							
Street Lights / Traffic Signal							
Metal Street Light Pole							
Traffic Signal Pole							
Control Box							
Pedestrian Crossing Pole							
Other							
Substation Fences							
Fence							
Other							
Transmission (Total)		1		1	1		
Lattice Tower							
Pole							
Ground		1		1	1		
Guy							
Other							
Miscellaneous Facilities							
Sidewalk							
Gate/Fence/Awning							
Traffic Sign							
Scaffolding							
Bus Shelter							
Fire Hydrant							
Phone Booth							
Traffic Control Box							
Water Pipe							
Riser							
Other							

# Summary of Shock Reports from the Public

Orange and Rockland Utilities, Inc. January 1, 2012 – December 31, 2012	Quarterly Update	Yearly Total
I. Total Shock calls received:	10	28
Unsubstantiated	2	6
Normally Energized Equipment	8	22
Stray Voltage:	8	22
Utility Responsibility (Total)	5	15
Person	4	14
Animal	1	1
Customer Responsibility (Total)	3	6
Person	3	6
Animal		
Other Utility/Gov't Agency (Total)		1
Person		
Animal		1
II. Injuries Sustained/Medical Attention Received	3	3
Person	2	2
Animal	1	1
III. Voltage Source: Stray Voltage Total	8	22
Utility Responsibility (Total)	5	12
Issue with primary, joint, or transformer	2	2
Secondary joint (Crab)		
SL service Line	1	1
Abandoned SL service line		
Defective service line		
Abandoned service line		
OH Secondary		
OH Service		
OH Service neutral	2	5
Pole		
Riser		
Other	_	4
Customer Responsibility (Total)	3	10
Contractor damage		1
Customer equipment/wiring	3	9
Other Utility/Gov't Agency (Total)		
SL Base Connection		
SL Internal wiring or light fixture		
Overhead equipment		
IV. Voltage Range	8	22
1.0V to 4.4V		
4.5V to 24.9V		3
25V and above		1
No Reading	8	18

# Distribution

			Οι	range	e anc	Rocl	kland	d Util	ities,	Inc.					
Summar	y of	Defic	cienc			epair ess –				lting	from	n the I	nspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level		II	III Within	 Within	II		l Within	II	III Within	 Within	II	III	l Within	I	III Within
Repair Expected	1 week		3	1		Within 3 years	1 week	Within	3	1		Within 3 years	1	Within	3
						Po	oles								
Pole Condition															
Number of Deficiencies	7	531	1	-	535	-	-	155	-	-	870	-	-	-	-
Repaired in Time Frame	7	284			517			155							
- Repaired Overdue		247			18										
Not Repaired - Not Due											870				
Not Repaired - Overdue			1												
Grounding System															
Number of Deficiencies	-	-	166	-	-	155	-	-	261	-	-	87	-	-	-
Repaired in Time Frame			134			134			60						
- Repaired Overdue			30												
Not Repaired - Not Due						21			201			87			
Not Repaired - Overdue			2												
Anchors/Guy Wire															
Number of Deficiencies		7	6,742	-	-	9,937	_	3	126	-	-	1,710	-	-	-

			0	rang	e and	d Roc	kland	d Util	ities	, Inc.					
Summa	ry of	Defi	cienc	ies a	and R Proc	lepair ess –	Acti	vity l	Resu ion	lting	from	the l	nspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level	1	II	III	I	II		1	II	III	I	II		I	II	III
Repair		Within	Within 3	1	Within		Within 1	Within		1	Within		Within 1	Within	
Expected	week	1 year	years	week	1 year	3 years	week	1 year	years	week	1 year	3 years	week	1 year	years
Anchors/Guy Wire (Cont)															
Repaired in Time Frame		7	6,563			590		3	8			8			
- Repaired Overdue			103												
Not Repaired - Not Due						9,347			118			1,702			
Not Repaired - Overdue			76												
Cross Arm/Bracing															
Number of Deficiencies	2	3	-	-	20	46	-	2	12	-	9	1	-	-	_
Repaired in Time Frame	2	3			20	5		2							
- Repaired Overdue															
Not Repaired - Not Due						41			12		9	1			
Not Repaired - Overdue															
Riser															
Number of Deficiencies	-	-	8	-	-	12	-	-	6	-	-	12	-	-	-
Repaired in Time Frame						1									
Repaired - Overdue															
Not Repaired - Not Due						11			6			12			
Not Repaired - Overdue			8												

			Or	ange	and	Rocl	kland	l Util	ities,	Inc.					
Summar	y of I	Defic	ienci	es ar F	nd Re Proce	epair ss –	Activ Distr	vity F 'ibuti	Resu on	lting	from	the	Inspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level	I	II	III	I	II		I	II	III	I	II		1	II	III
Repair Expected		Within 1 year	Within 3 years	1	Within 1 year	Within 3 vears	1	Within 1 year		1	Within 1 year	3	Within 1 week	Within 1 year	
	week	r your	youro	hook	, your	1.5	uctor	1 .	Jouro	week	i you	Joaro	noon	r your	Jouro
Primary Wire/Broken Ties															
Number of Deficiencies		4	39	1	23	264	1	1	27	4	-	41	-	-	-
Repaired in Time Frame	4	4	24	1	23	9	1	1		4					
Repaired - Overdue			3												
Not Repaired - Not Due						255			27			41			
Not Repaired - Overdue			12												
Secondary Wire															
Number of Deficiencies	6	-	-	-	-	83	-	-	1	2	3	20	-	-	-
Repaired in Time Frame	6					2				2	2				
- Repaired Overdue															
Not Repaired - Not Due						81			1		1	20			
- Not Repaired Overdue															
Neutral															
Number of Deficiencies		-	-	-	-	-	-	-		-	-	-	-	-	-
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															

			Or	ange	and	Rocl	klanc	l Utili	ities,	Inc.					
Summar	y of I	Defic	ienci		nd Re Proce					lting	from	the	Inspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level				I	II		I	II	III	I	II				III
Repair	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3
Expected		1 year	years		1 year							years		1 year	
						Cond	luctor	s							
Neutral (Cont)															
- Not Repaired Overdue															
Insulators															
Number of Deficiencies	-	-	-	_	1	22	-	_	16	-	1	-	-	-	-
Repaired in Time Frame					1										
Repaired - Overdue															
- Not Repaired Not Due						22			16		1				
- Not Repaired Overdue															
					Р	ole Ec	quipm	ent							
Transformers															
Number of Deficiencies	1	-	-	1	-	-	1	_	_	5	-	_	-	-	_
Repaired in Time Frame	1			1			1			5					
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Cutouts															
Number of Deficiencies		5	-	-		-	_	_	_	-	-	-	-	-	_
Repaired in Time Frame		5													

			Ora	ange	and	Rocl	kland	l Util	ities,	Inc.					
Summar	y of I	Defic	ienci		nd Re Proce					ting	from	the	nspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level		II	III	I	I		I	II	III	I	I		I	II	
Repair Expected		Within 1 year	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year		1	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
					P	ole Ec	uipm	ent							
Cutouts (Cont)															
Not Repaired - Not Due															
Not Repaired - Overdue															
Lightning Arrestors															
Number of Deficiencies	-	-	14	-	-	30	-	-	3	-	-	-	-	-	-
Repaired in Time Frame			9			1									
- Repaired Overdue			4												
Not Repaired - Not Due						29			3						
Not Repaired - Overdue			1												
Other Equipment															
Number of Deficiencies	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue															

			Ora	nge a	and F	Rock	land	Utilit	ties,	Inc.					
Summary	of D	eficie	encie		d Rep oces					ting f	rom	the I	nspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level	I	II		I	II	III	I	II	III	I	II	III	I		III
Repair Expected	Within 1 week	Within	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year	3	Within 1 week	Within 1 year	Within 3 years	1	Within	
					Mi	iscella	aneou	S							
Trimming Related															
Number of Deficiencies	3	67	12	-	192	62	-	18	31	-	8	24	-	-	-
Repaired in Time Frame	3	46	10		192	12		18							
- Repaired Overdue		21													
- Not Repaired Not Due						50			31		8	24			
- Not Repaired Overdue			2												
Other															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

			0	rang	e an	d Rocl	kland	l Util	ities,	Inc.					
Summa	ry of	Defi	cienc			Repair sess –				lting	from	n the I	nspe	ectio	n
As of 12/31/12															
Overhead Facilities		2009			2010			2011			2012			2013	
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	П	
Repair Expected		Within	Within 3 years	1	Within 1 year	Within 3 years	Within 1 week	Within 1 year		1		Within 3 years	Within 1 week	Within 1 year	Within 3 years
					Ove	head F	aciliti	es To	tal						
Total															
Number of Deficiencies	23	617	6,982	2	771	10,611	2	179	483	11	891	1,895	-	-	-
Repaired in Time Frame		349	6,740	2	753	754	2	179	68	11	2	8	-	-	-
Repaired - Overdue	_	268	140	-	18	-	-	_	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	0	-		9,857	-	-	415	-	889	1,887	-	-	-
<sup>10</sup> Not Repaired - Overdue	-	-	102	-	-	_	-	-	-	-	-	-	-	-	-

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<sup>&</sup>lt;sup>10</sup> The majority of the overdue repairs were due to unavailable resources during the restoration of Hurricane Sandy.

# Transmission

			Or	ange	and	Rock	kland	Utili	ties,	Inc.					
Summar	y of	Defic	ienci			epair ss - T				ting	from	the	Inspe	ection	n
As of 12/31/12															
Transmission Facilities		2009			2010			2011			2012			2013	
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III		II	III
Repair Expected		Within	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year	Within 3 vears	1	Within 1 year	Within 3 years	Within 1 week	Within 1 year	
Expected	Week	i year	years	Week		owers			years	Week	I year	years	Week	r year	years
Steel Towers															
Number of Deficiencies	-		70	-	_	45			6	-	_	_	-		
Repaired in Time Frame			20												
- Repaired Overdue															
Not Repaired - Not Due			0			45			6						
Not Repaired - Overdue			50												
Poles															
Number of Deficiencies	-	84	2,339	-	21	1,089	-	2	201	-	-	62	-	-	-
Repaired in Time Frame		24	1,168		5	249		2	30						
- Repaired Overdue		32	87		6										
Not Repaired - Not Due						840			171			62			
Not Repaired - Overdue		28	1,084		10										
Anchors/Guy Wire															
Number of Deficiencies	-	-	35	-	-	11	-	_	12	-	-	4	-	_	_
Repaired in Time Frame			14			6			5			1			
- Repaired Overdue			1												

			Ora	nge a	and F	Rock	land	Utilit	ies,	Inc.					
Summary	of De	eficie	encies		d Rep cess					ing f	rom	the I	nspe	ection	า
As of 12/31/12															
Transmission Facilities		2009			2010			2011			2012			2013	
Priority Level	I			I	II	III	I	II		I	II	III	I		
Repair Expected	Within 1 week	Within 1 year	Within 3 years	1	Within	3	Within 1 week	Within	3	Within 1 week	Within 1 year	Within 3 years	1	Within 1 year	
					То	wers	/ Pole	s				-			
Anchors/Guy Wire (Cont)															
- Not Repaired Not Due						5			7			3			
- Not Repaired Overdue			20												
Crossarm/Brace															
Number of Deficiencies	-	9	398	-	1	69	_	1	19	-	-	5	-	-	-
Repaired in Time Frame		2	151		1	18		1	2						
- Repaired Overdue		3	13												
Not Repaired - Not Due						51			17		-	5			
- Not Repaired Overdue		4	234												
Grounding System															
Number of Deficiencies	-	7	24	-	1	31	-	-	28	-	-	17	-	-	-
Repaired in Time Frame			12		1	12			12			1			
- Repaired Overdue		4	1												
- Not Repaired Not Due						19			16			16			
- Not Repaired Overdue		3	11												

			Ora	nge a	and F	Rock	land	Utilit	ies,	Inc.					
Summary	of De	eficie	encie		d Rep cess					ing f	rom	the I	nspe	ection	า
As of 12/31/12															
Transmission Facilities		2009			2010			2011			2012			2013	
Priority Level	I	Ш		I	II	III	I	II	Ш	I	II	III	I	Ш	
Repair Expected	Within 1 week	Within 1 vear	3	Within 1 week	Within 1 year	3	Within 1 week	Within	3	Within 1 week	Within	3	Within 1 week	Within	
			,		1	Condu	0	- <b>,</b>	<b>,</b>			,	1		<b>,</b>
Cable															
Number of Deficiencies	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Repaired in Time Frame						2									
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue															
Static/Neutral															
Number of Deficiencies	-	1	-	-	-	-	_	-	-	-	-	-	-	-	-
Repaired in Time Frame		1													
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue															
Insulators															
Number of Deficiencies	-	3	31	-	-	11	-	-	1	-	-	3	-	-	3+-
Repaired in Time Frame		3	9			1									
- Repaired Overdue															
- Not Repaired Not Due						10			1			3			

			Ora	nge a	and F	Rock	land	Utilit	ies,	Inc.					
Summary	of De	eficie	encies		d Rep ocess					ing f	rom	the I	nspe	ection	ו
As of 12/31/12															
Transmission Facilities		2009			2010			2011			2012			2013	
Priority Level	I	Ш	III	Ι	I	III	I	II	ш	Ι	II	III	I	Ш	
Repair Expected	Within 1 week	Within 1 year	Within 3 years	1	Within 1 year	3	Within 1 week	Within	3	Within 1 week	Within		1	Within 1 year	
		1	1	1	C	Condu	ictors	1	1	1		1	1	1	
Insulators(Cont)															
- Not Repaired Overdue			22												
					Mi	iscella	aneou	s							
Right of Way Condition															
Number of Deficiencies	-	8	435	-	-	131	-	-	57	-	-	7	-	-	-
Repaired in Time Frame		1	331			91			2						
Repaired - Overdue		4													
- Not Repaired Not Due						40			55			7			
Not Repaired - Overdue		3	104												
Other															
Number of Deficiencies	3	-	1	_	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue	3														
Not Repaired - Not Due															
Not Repaired - Overdue			1												

			Ora	nae a	and F	Rock	and	Utilit	ies.	nc.					
Summary	of D	eficie		s an	d Re		<b>\ctiv</b>	ity R	esult		rom	the I	nspe	ectior	ו
As of 12/31/12															
Transmission Facilities		2009			2010			2011			2012			2013	
Priority Level	I	I	III	I	II		I	II		I	II			П	
Repair Expected	Within 1 week	Within		1	Within 1 year	Within 3 years	1	Within		1	Within		1	Within	
			Т	rans	miss	sion F	acili	ties	Tota	I					
Total															
Number of Deficiencies	3	112	3,333	-	23	1,389	-	3	324	-	-	98	-	-	-
Repaired in Time Frame	-	31	1,705	-	7	379	-	3	51	-	-	2	-	-	-
- Repaired Overdue	3	43	102	-	6	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	-	-	-	1,010	-	-	273	-	-	96	-	-	-
<sup>11</sup> Not Repaired - Overdue	-	38	1,526	-	10	-	-	-	-	-	-	-	-	-	-

<sup>&</sup>lt;sup>11</sup> The majority of the overdue repairs were due to the unavailability to obtain system outages that would not impact on reliability and capital projects.

# Underground

			Or	ange	e and	Roc	kland	d Util	ities.	Inc.					
Summar	y of	Defic		ies a		epair	Acti	vity F	Resu		from	the	Inspe	ectio	n
As of 12/31/12															
Underground Facilities		2009			2010			2011			2012			2013	
Priority Level	I	1		I	I		I	II		I	II	III	I	I	
Repair Expected	Within 1 week	Within 1 vear	3	Within 1 week	Within 1 year		1	Within 1 vear		1	Within 1 year	3	Within 1 week	Within 1 year	
•		,	,			1.5	nd Str		1.1					,	
Damaged Cover															
Number of Deficiencies	18	4	1	-	-	-	-	-	8	-	3	6	-	-	-
Repaired in Time Frame	18	4	1								2	1			
- Repaired Overdue															
Not Repaired - Not Due									8		1	5			
Not Repaired - Overdue															
Damaged Structure															
Number of Deficiencies	3	4	2	_	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	3	4	1												
- Repaired Overdue															
Not Repaired – 'Not Due															
Not Repaired - Overdue			1												
Congested Structure															
Number of Deficiencies		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															

			Or	range	e and	Roc	kland	d Util	ities,	Inc.					
Summar	y of	Defic	ienc		nd Ro roce					lting	from	the	Inspe	ectio	n
As of 12/31/12															
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	3	Within 1 week	Within 1 year		1	Within 1 vear	3	Within 1 week	Within 1 year	3	Within 1 week	Within 1 year	
		<b>] ) c</b> a.	Joaro			1.5			1.1			<b>, , , , , , , , , ,</b>		, joan	<b>)</b> eu! e
Congested Structure (Cont)															
Not Repaired - Not Due															
- Not Repaired Overdue															
Damaged Equipment															
Number of Deficiencies	-	-	-	-	-	-	23	-	-	8	-	-	-	-	-
Repaired in Time Frame							23			8					
- Repaired Overdue															
- Not Repaired Not Due															
Not Repaired - Overdue															
						Cond	ductor	ſS							
Primary Cable															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

			Or	ange	and	Roc	kland	l Util	ities,	Inc.					
Summar	y of I	Defic	ienci	es ar P	nd Re roces	epair ss - L	Activ Jnde	vity F rgrou	Resu und	lting	from	the	Inspe	ectio	n
As of 12/31/12															
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		Within	Within 3	1	Within		1	Within	3	Within 1	Within	3	Within 1	Within	Within 3
Expected	week	1 year	years	week	1 year	years			years	week	1 year	years	week	1 year	years
		1		1		Cond	luctor	S		1	1		1		
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											1				
- Not Repaired Not Due											1				
Not Repaired - Overdue															
Racking Needed															
Number of Deficiencies	_	-		-	-	-	-	-	-	-	-	-	-	_	_
Repaired in Time Frame															
- Repaired Overdue															
- Not Repaired Not Due															

r			Ora	ange	and	Rocl	kland	l Util	ities,	Inc.					
Summar	y of I	Defic	ienci			epair ss - L				lting	from	the	Inspe	ectio	n
As of 12/31/12															
Underground Facilities		2009			2010			2011			2012			2013	
Priority Level	I	II	III	I	II	III	I	I	III	I	II	III	I	II	III
Repair	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3	Within 1	Within	Within 3
Expected	week	1 year	years	week		years			-		1 year	-	week	1 year	-
	1				1	Cond	uctor	S							
Racking Needed(Cont)															
Not Repaired - Overdue															
					ľ	<b>Niscel</b>	laneo	us							
Other															
Number of Deficiencies	-	2	10	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame		2													
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue			10												

Orange and Rockland Utilities, Inc.															
Summary of Deficiencies and Repair Activity Resulting from the Inspection Process – Underground															n
As of 12/31/12															
Underground Facilities		2009			2010			2011			2012			2013	
Priority Level		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	1	Within 1 year		1	Within 1 year	Within 3 years	1	Within	Within 3 years	1	Within 1 year	Within 3 years
				Und	ergro	ound	Faci	lities	Tota	ıl					
Total															
Number of Deficiencies	21	10	13	-	-	-	23	-	8	8	3	6	-	-	_
Repaired in Time Frame	21	10	2	-	-	-	23	-	-	8	2	1	-	-	_
Repaired - Overdue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
Not Repaired - Not Due	-	-	-	-	-	-	-	-	8	-	1	5	-	-	-
<sup>12</sup> Not Repaired - Overdue	-	-	11	-	-	-	-	-	-	-	-	-	-	-	_

<sup>&</sup>lt;sup>12</sup> The majority of overdue repairs were due to access issues regarding customer coordination.

## **Pad Mount Transformers**

			Or	ange	and	Roc	kland	d Util	ities,	Inc.					
Summar	y of I	Defic			nd Ro s - Pa						from	the	Inspe	ectio	n
As of 12/31/12															
Pad Mount Transformers		2009			2010			2011			2012			2013	
Priority Level	I	I	III	I		III	I			I	II		I	II	
Repair Expected		Within	3	Within 1 week	Within 1 year	3	Within 1 week	Within 1 year		Within 1 week	Within 1 year	Within 3 years	1	Within 1 year	
-			-		Pad N	lount	Trans	forme	ers			1-			
Damaged Structure															
Number of Deficiencies		-	-	20	-	-	2	1	-	14	-	-	-	-	_
Repaired in Time Frame				20			2	1		14					
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Damaged Equipment															
Number of Deficiencies		-	-	3	1	-	-	-	-	12	-	-	-	-	-
Repaired in Time Frame				3	1					12					
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Cable Condition															
Number of Deficiencies		3	-	-	-	-	3	-	-	5	-	-	-	-	_
Repaired in Time Frame		3					3			5					
- Repaired Overdue															

			Ora	nge a	and F	Rock	land	Utili	ties,	Inc.					
Summary	of De	eficie					Activ unt 1				rom	the I	nspe	ectio	า
As of 12/31/12															
Pad Mount Transformers		2009			2010			2011			2012			2013	
Priority Level	I	I	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within	Within 3 years	1 week	Within 1 year	3 years	a	1 .	1.1	1	Within 1 year	3	Within 1 week	Within 1 year	Within 3 years
		1	1	P	ad Mo	ount T	ransf	ormer	S		1		1		
Cable Condition(Cont)															
- Not Repaired Not Due															
- Not Repaired Overdue															
Oil Leak															
Number of Deficiencies	3	-	-	-	-	-	26	-	-	71	-	-	-	_	-
Repaired in Time Frame	3						26			71					
- Repaired Overdue															
- Not Repaired Not Due															
Not Repaired - Overdue															
Off Pad															
Number of Deficiencies	67	-	-	23	-	-	11	-	-	42	-	-	-	-	-
Repaired in Time Frame	67			23			11			42					
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue															
Lock/Latch/Pen															
Number of Deficiencies	12	-	3	3	-	2	3	3	1	44	-	1	-	-	-
Repaired in Time Frame	12		3	3		2	3	3		44		1			
- Repaired Overdue															

			Ora	nge a	and F	Rock	land	Utilit	ties,	Inc.					
Summary	of D	eficie						ity R Frans			from	the I	nspe	ectio	n
As of 12/31/12															
Pad Mount Transformers		2009			2010			2011			2012			2013	
Priority Level	Ι	I	III	I	I	III	I	II		I	I	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	1	Within 1 year		1	Within 1 year	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year	
		-	-		1 .	1.5		ormer	1.1						
Lock/Latch Penta (Cont)															
- Not Repaired Not Due									1						
- Not Repaired Overdue										-					
	-	·		-	М	iscell	aneou	IS	·	-	<u> </u>	<u> </u>			
Other															
Number of Deficiencies	-	-	202	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame			20												
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue			182												
			P	ad N	loun	t Tra	nsfo	rmer	Tota	ıl					
Total															
Number of Deficiencies	143	3	205	49	1	2	45	4	1	188	-	1	-	-	-
Repaired in															
Time Frame	143	3	23	49	1	2	45	4	-	188	-	1	-	-	-
- Repaired Overdue	-	_	-	-	-	-	-		-	-	-	-	-	_	-
Not Repaired - Not Due	-	-		-	-	-	-		1	-	-	-	-	-	-
<sup>13</sup> Not Repaired - Overdue	-	-	182	-	-	-	-	-	_	-	-	-	-	-	-

\_\_\_\_\_

<sup>&</sup>lt;sup>13</sup> The majority of overdue repairs were due to access issues regarding customer coordination.

# Street Lights

			Ora	ange	and	Rocl	kland	l Util	ities,	Inc.					
Summar	y of [	Defici		es ar	nd Re		Acti	vity F	Resu		from	the	Inspe	ectio	n
As of 12/31/12															
Streetlights		2009			2010			2011			2012			2013	
Priority Level	I	I	III	I	II		I	II		I	II	III	I	I	III
Repair Expected		Within 1 year	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year	Within 3 years	1	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
						Stree	t Ligh	ht							
Base/Light															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Handhole/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															

			Ora	ange	and	Rock	kland	Utili	ties,	Inc.					
Summary	of D	efici	encie	es an P	nd Re roce	epair ss –	Activ Stree	/ity R etligh	lesul Its	ting	from	the	Inspe	ectio	n
As of 12/31/12															
Streetlights		2009			2010			2011			2012			2013	
Priority Level	I	II	III	I	II		I	II		I	I	III	I	II	
Repair Expected	Within 1 week	Within	3	Within 1 week	Within		1	Within 1 year	Within 3 vears	1	Within		1	Within 1 year	
	WOON	r your	Jouro	week	, you	1.	t Ligh		Jouro	week	, you	Jouro	week	r you	Jouro
Access Cover															
Number of Deficiencies	-	-	2	-	-	-	-	-	-	-	-	-	-	-	_
Repaired in Time Frame															
- Repaired Overdue			2												
- Not Repaired Not Due															
- Not Repaired Overdue															
					N	liscel	laneo	us							
Other															
Number of Deficiencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame															
- Repaired Overdue															
- Not Repaired Not Due															
- Not Repaired Overdue															
					Stre	et Li	ight T	<b>Fotal</b>							
Total															
Number of Deficiencies	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Repaired in Time Frame	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-
- Repaired Overdue	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Not Repaired - Not Due	-	-	_	-	-	-	-	-	-	-	-	-	-	_	_
Not Repaired - Overdue	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-

## **Level IV Conditions**

		C	Drange a	and Roc	kland Ut	ilities, I	nc.			
Summary o	of Defici		nd Rep		ity Resu	lting fro		nspectio	on Proc	ess –
As of 12/31/12										
Level IV Conditions	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013
	Number of Conditions Found	Number of Conditions Repaired								
				Overhea	d Facilitie	s				
Pole Condition	6,995	5,955	13,638	930	3,179	504	7,079	28	-	-
Pole Condition	768	567	2,868	125	360	16	1,167	4		
Grounding System	2,207	1,977	3,633	306	1,685	385	2,118	4		
Anchors/Guy Wire	4,020	3,411	7,134	499	1,134	103	3,794	20		
Cross Arm/Bracing			3							
Riser										
Conductors	-	-	1	-	-	-	-	-	-	-
Primary Wire/Broken Ties										
Secondary Wire										
Neutral			1							
Insulators										
Pole Equip	-	-	-	-	-	-	-	-	-	-
Transformers										
Cutouts										
Lightning Arrestors										
Other Equipment										
Miscellaneous	-	-	-	-	-	-	-	-		-
Trimming Related										
Other										
Overhead Facilities Total	6,995	5,955	13,639	930	3,179	504	7,079	28	-	-
			Т	rans mis s	ion Facili	ties				
Towers/Poles	214		1,017	-	2,437	24	2,240	-		-
Steel Towers	144		189		404		178			

-										
Poles	70		828		2,033	24	2,062			
		C	Drange a	and Roc	kland Ut	tilities, l	nc.			
Summary o	of Defici	encies a	nd Rep	air Activ	vity Resu	ulting fro	om the l	nspectio	on Proc	ess –
			L	evel IV	Conditio	ns				
As of 12/31/12										
Level IV										
Conditions	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013
	Number of Conditions Found	Number of Conditions Repaired								
			Т	rans mis s	ion Facili	ties				
Towers/Poles (Cont)										
Grounding System										
Anchors/Guy Wire										
Crossarm/Brace										
Conductors	-	-	-	-	-	-	-	-	-	-
Cable										
Static/Neutral										
Insulators										
Miscellaneous	18	9	253	-	866	-	81	-	-	-
Right of Way Condition			13		84		81			
Other	18	9	240		782					
Transmission Facilities Total	232	9	1,270	-	3,303	24	2,321	-	-	-

		Ora	nge and	Rockla	nd Utili	ties, Ind	<b>C</b> .			
Summary of Defic	eiencies	and Re		tivity R V Condi		g from t	he Inspe	ection F	rocess	- Level
			1							
As of 12/31/12										
Level IV Conditions	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013
			Number of Conditions						Number of Conditions	Number of Conditions
	Found	Repaired	Found	Repaired	Found	Repaired	Found	Repaired	Found	Repaired
			Unde	rground	Structure	s				
Underground										
Structures	-	-	2	-	-	-	1	-	-	-
Damaged Cover										
Damaged Structure			2							
Congested Structure										
Damaged Equipment										
Conductors	-	-	-	-	-	-	-	-	-	-
Primary Cables										
Secondary Cable										
Neutral Cable										
Racking Needed										
Miscellaneous	-	-	-	-	-	-	-	-	-	-
Other							1			
Underground										
Structures Total	-	-	2	-	-	-	1	-	-	-
D. 134	1	1	Pad N	lount Tra	ins forme	rs	1		1	
Pad Mount Transformers	-	-	42	-	-	-	29	-	-	-
Damaged Structure			42	-			29			
Damaged Equipment										
Cable Condition										

		Ora	nge and	d Rockla	and Util	ities, In	с.			
Summary of D	eficienc	cies and					m the Ir	nspectio	on Proc	ess -
			Lev	el IV Co	ndition	S		1		
As of 12/31/12										
Level IV Conditions	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013
		Number of Conditions Repaired			Number of Conditions Found				Number of Conditions Found	Number of Conditions Repaired
			Pad I	Mount Tr	ans forme	rs				
Pad Mount Trans formers (Cont)										
Oil Leak										
Off Pad										
Lock/Latch/Penta										
Miscellaneous	-	-	-	-	-	-	-	-	-	-
Other										
Pad Mount Transformer Total	-	-	42		-	-	29	-	-	-
				Streetli	ghts					
Street Light	-	-	-	-	-	-	-		-	-
Base/Standard/Light										
Handhole/Service Box										
Service/Internal Wiring										
Access Cover										
Miscellaneous	-	-	-	-	-	-	-	-	-	-
Other										
Street Light Total	-	-	-	-	-	-	-	-	-	-
					Conditio:				1	
Overall Total	7,227	5,964	14,953	930	6,482	528	9,340	28	-	-

# Summary

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		Orange	and Rocklan	d Utilities	, Inc.		
Su	mmary	of Deficiencies ar	nd Repair Act Proces		Ilting from	the Inspe	ection
	As of	12/31/12					
Year	Prio	rity Level /Repair Expected	Deficiencies Found (Total)	Repaired In Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired – Overdue
2009	I	Within 1 week	190	187	3	-	-
	I	Within 1 year	742	393	311	-	38
		Within 3 years	10,535	8,470	244		1,821
	IV	N/A	7,227	-	-	-	-
2010	I	Within 1 week	51	51	-	-	-
	II	Within 1 year	795	761	24	-	10
	III	Within 3 years	12,002	1,135	-	10,867	-
	IV	N/A	14,953	-	-	-	-
2011	I	Within 1 week	70	70	-	-	-
	I	Within 1 year	186	186	-	-	-
	- 111	Within 3 years	816	119	-	697	-
	IV	N/A	6,482	-			
2012	I	Within 1 week	207	207	-	-	-
	II	Within 1 year	894	4	-	890	-
	Ш	Within 3 years	2,000	12	-	1,988	-
	IV	N/A	9,430	-	-	-	-
2013	I	Within 1 week	-	-	-	-	-
		Within 1 year	-	-	-	-	-
	III	Within 3 years	-	-	-	-	-
-	IV	N/A	-	-			

### Exhibit 1

### CERTIFICATION STRAY VOLTAGE TESTING

STATE OF NEW YORK

COUNTY OF ROCKLAND

ss.:

Francis W. Peverly, on this  $2^{3}$  day of February 2013, certifies as follows:

-h-

- 1. I am the Vice President of Orange and Rockland, Inc. ("the Company"), and in that capacity, I make this Certification for the annual period ending December 31, 2012 ("annual period") based on my knowledge of the testing program adopted by the Company in accordance with the Public Service Commission's Orders issued and effective January 5, 2005, July 21, 2005, and December 15, 2008 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 publicly accessible metallic street light and traffic signal poles located in public thoroughfares in the Company's service territory ("Street Lights"), as identified through a good faith effort by the Company, for stray voltage (the "Stray Voltage Testing Program").
- 3. 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 annual period. Except for untested structures that are identified as inaccessible in the Company's Annual Report, submitted herewith, as well as the 278 underground structures inadvertently omitted as noted in footnote 3 of page 6 of the Company's Annual Report, <sup>14</sup> the Company is unaware of any Facilities or Street Lights that were not tested during the annual period.

<sup>&</sup>lt;sup>14</sup> As noted in footnote 3 on page 6 of the Company's Annual Report, O&R tested these 278 underground structures during January and February 2013 and identified no stray voltage conditions.

4. 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 Street Lights 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 Street Lights were known to exist or reasonably expected to be found.

evel

Francis W. Peverly

Sworn to before me this 3 day of February, 2013

Notary Public:

Joann E. Dagele

JOANN E. DAGELE Notary Public, Scate of New York No. 310/56035650 Qualified in Unit Na County Commission Expires 4/20/ **2014** 

#### **CERTIFICATION**

#### **FACILITY INSPECTIONS**

STATE OF NEW YORK

COUNTY OF ROCKLAND

) ss.:

Francis W. Peverly, on this  $\underline{13}^{\text{th}}$  day of February 2013, certifies as follows:

- 1. I am the Vice President, Operations of Orange and Rockland, Inc. ("the Company"), and in that capacity I make this Certification for the annual period ending December 31, 2012 based on my knowledge of the inspection program adopted by the Company in accordance the Public Service Commission's Orders issued and effective January 5, 2005, July 21, 2005, and December 15, 2008 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 on a five-year inspection cycle all of its electric facilities, 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 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 2012, in order to comply with the five-year inspection cycle required under the Orders.

in the

Sworn to before me this  $\underline{13}^{n}$  day of February, 2013

Notary Public:

John E. Dagele

JOANN E. DAGELE Notary Public, State of New York No. 01DA6005650 Qualified in Orange County Commission Expires 4/20/\_2014