Orange and Rockland Utilities, Inc.

STRAY VOLTAGE TESTS AND FACILITY INSPECTIONS

Report on the results of stray voltage tests and facility inspections for the year ended December 31, 2019

February 15, 2020

Pearl River, New York

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I. Background

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards issued on January 5, 2005 (with subsequent revisions issued on July 21, 2005, December 15, 2008, March 22, 2013 and January 13, 2015) ("Safety Standards"),[1] require electric utilities in New York State to stray voltage test their publicly accessible underground electric facilities annually, including but not limited to, manholes, service boxes, and transformer vaults. Stray voltage testing shall be conducted on the exposed surfaces of the facilities. Annual stray voltage testing shall also be conducted on utility and non-utility owned, publicly accessible, metallic street light and traffic signal poles located in public thoroughfares in an electric utility's service territory. The Safety Standards require an electric utility to stray voltage test overhead distribution facilities, underground residential distribution facilities, overhead and underground transmission facilities, and substation fences concurrently with the facility five-year inspections required by the Safety Standards.

This Stray Voltage Tests and Facility Inspections Report ("Report") describes the stray voltage detection program and equipment inspection program Orange and Rockland Utilities, Inc. ("O&R" or the "Company") conducted in 2019.

II. Company Overview

O&R is an investor-owned utility that provides electric service to approximately 233,000 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 212 distribution circuits with approximately 3,041 overhead circuit miles and 1,594 conductor miles of underground cable, nearly 466 transmission circuit miles, 44 distribution substations, 7 transmission substations, 5 transmission/distribution substations, 8 transition structures located in 6 transition yards and 5 transmission switchyards. The Company also owns the transmission interconnections to 8 substations for single industrial customers.

III. Stray Voltage Testing Program

- Testing personnel

  O&R conducted separate stray voltage test programs for its transmission system and its distribution system. Non-Company labor (*i.e.*, contractors), selected through O&R's bid selection process, was used to perform the test work associated with each program.

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[1] Case 04-M-0159 – *Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems*, Order Instituting 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),Order Adopting Changes to Electric Safety Standards (issued March 22, 2013), and Order Granting a Petition to Modify Electric Safety Standards (issued January 13, 2015).

➢ 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 certified low voltage AC test probe.[2] These probes were used to detect AC voltage on publicly accessible, conductive equipment or apparatus.

➢ Training

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, conducted by the Company. 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.

➢ Stray Voltage Testing

During the annual period ended December 31, 2019, O&R conducted stray voltage testing of its publicly accessible underground electric facilities, including but not limited to, manholes, service boxes, and transformer vaults. Stray voltage testing was conducted on the exposed surfaces of the facilities. Annual stray voltage testing was also conducted on Company and non-Company owned, publically accessible, metallic street light and traffic signal poles located in public thoroughfares in the Company's service territory. In addition, the Company performed stray voltage tests on its overhead distribution facilities and underground residential distribution facilities, concurrently with the facility five-year inspections required by the Safety Standards.

In accordance with the Safety Standards, O&R:

a. Immediately safeguarded and /or mitigated eight voltage findings ≥ 1.0 volt identified in 2019. 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 where there was a stray voltage finding ≥ 1. 0 volt.

[2] The HD device is certified to detect AC voltage within a range of 5 volts to 600 volts.

There are 179,497 structures that comprise O&R's T&D system and 2,770 metallic street light and traffic signal poles. Among the Company-owned structures, there are structures that 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. Locked Gate/Fence – Poles behind locked gates and fences that are not accessible to the public, *e.g.*, facilities located in fenced areas owned by other utilities, such as, water companies.
b. Dangerous Grades – Poles located on cliffs and other dangerous grades are generally inaccessible to Company personnel and the public and are approached only under urgent circumstances. The performance of stray voltage testing would constitute an unacceptable risk to the employee.
c. Company Property – Poles located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
d. Vaults - Structures located inside buildings. These structures are accessible only to Company and building maintenance personnel.
e. Limited Access Highway Facilities – Structures located on highways, exit and entrance highway ramps. These structures are generally inaccessible to the public. The performance of stray voltage testing would constitute an unacceptable risk to the employee.

In accordance with the Commission's June 23, 2011 Order,[3] O&R was not required to perform mobile testing during the annual period ended December 31, 2019 because there is no city with a population of at least 50,000 located in the Company's service area and the Company does not have an underground network system where mobile testing is effective.

[3] Case 10-E-0271 - *Proceeding on Motion of the Commission to Examine the Mobile Testing Requirements of the Safety Standards,* Order Requiring Additional Mobile Stray Voltage Testing (issued June 23, 2011)

IV. Facility Visual Inspection Program

O&R conducted the majority of the visual inspections in conjunction with its stray voltage testing program. The Company performed separate visual inspections on its fiberglass and de-energized facilities. Contractors performed all of the stray voltage tests and visual inspections.

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.

- Training

  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.

- 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:

  - 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 represents a threat to safety and/or reliability should a failure occur prior to repair.

- Level III – Repair within three years. A Level III deficiency does not present immediate safety or operational concerns and would likely have minimum impact on the safe and reliable delivery of power if it does fail prior to repair.
- Level IV – Condition found but repairs not needed at this time. Level IV is used to track atypical conditions that do not require repair within a five-year timeframe. This level 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, to this Report contains the following information:

- Deficiencies found;
- Permanent repair actions taken by year (2015-2019);
- Whether the repair was completed within the required timeframe; and
- The number of deficiencies awaiting repair.

The information is provided on an annual basis by priority level and by equipment groupings.

V. Program Facilities

- Structure Categories – There are 179,497 structures that comprise O&R's T&D system and 2,770 street lights and traffic signals. The Company facilities are sorted into the following four main categories:

- Distribution Overhead – There are 139,257 distribution pole structures in O&R's service territory. Twenty percent of the 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 33,151 underground facilities in O&R's service territory. Twenty percent of the facilities are included in both the stray voltage and inspection programs. The stray voltage testing criteria includes subsurface structures and above ground structures. Included in the above ground structures are pad mount transformers and switchgear enclosures. All subsurface structures include electric utility manhole covers, submersible transformer covers and electric utility metal hand hole covers.

- Street Lights and Traffic Signals – There are 2,770 metallic street light poles and traffic signals within O&R's service territory. 533 of the 2,770 are Company-owned street lights. All metallic street light and traffic signal poles are included in O&R's

annual stray voltage testing program. The Company-owned streetlights 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.[4] The stray voltage testing criteria includes 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 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 73 substation fences and approximately 7,016 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. O&R inspects its transmission system annually. The Company performed stray voltage testing on all transmission structures and substation fences in 2016. The stray voltage testing criteria includes all structures, guys, and down leads attached to the structures. Pursuant to the Safety Standards, stray voltage testing is required to be performed again in 2021.

VI. Annual Performance Targets

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 for the annual period ended December 31, 2019. The structures tested and testing results are set forth in Appendix 1, Stray Voltage Testing Summary, of this Report.

The results are summarized in the tables set forth below.

Inspection Performance Summary

179,497 Total O&R Transmission and Distribution Structures

Inspection Year	Number of Transmission and Distribution Structures Inspected in 2019	% of Transmission and Distribution Structures Inspected in 2019	Cumulative % of Transmission and Distribution Structures Inspected

[4] Pursuant to the Commission's direction, the Company continues to perform stray voltage testing on those street lights that it sells to municipalities. [*See*, Case 19-E-0505 - *Petition of Orange and Rockland Utilities, Inc. for Authority, Pursuant to Public Service Law Section 70, to Transfer Street Lighting Facilities to the Village of Florida*, Order Authorizing Property Transfer (issued December 13, 2019)(p. 5).]

			During 5-Year Cycle 2015 – 2019
2019	43,579	24.3%	100%

139,257 Total Overhead Distribution Structures

Inspection Year	Number of Overhead Distribution Structures Inspected in 2019	% of Overhead Distribution Structures Inspected in 2019	Cumulative % of Overhead Distribution Structures Inspected During 5-Year Cycle 2015 – 2019
2019	28,722	20.6%	*100%

**98.8% due to Not Found and Inaccessible. 100% visited 2015-2019*

7,089 Total Overhead Transmission Structures

Inspection Year	Number of Overhead Transmission Structures Inspected in 2019	% of Overhead Transmission Structures Inspected in 2019	Cumulative % of Transmission Structures Inspected During 5-Year Cycle 2015 – 2019
2019	7,089	100%	100.0%

33,151 Total Underground Structures and Pad-Mounted Transformers

Inspection Year	Number of Underground Facilities and Pad-Mounted Transformers Inspected in 2019	% of Underground Facilities and Pad-Mounted Transformers Inspected in 2019	Cumulative % of Underground Facilities and Pad-Mounted Transformers Inspected During 5-Year Cycle 2015 – 2019
2019	7,296	22%	*100%

**85.2% due to Not Found and/or Inaccessible. 100% visited 2015-2019*

533 Total O&R Street Lights

Inspection Year	Number of Street Lights Inspected in 2019	% of Street Lights Inspected in 2019	Cumulative % of Street Lights inspected during 5-Year Cycle (2015 – 2019)
2019	472	*88.6%	*100%

**88.6% due to Not Found and/or Inaccessible. 100% visited 2015-2019*

VII. Certifications

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 its street lights and traffic signals within the service territory. Publically accessible overhead distribution facilities, underground residential facilities were tested concurrently with the facility inspection required in Section 4 of the Electric Safety Standards, 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. Analysis of Causes of Findings and Stray Voltage

- Of the 179,497 electrical structures that comprise O&R's T&D system and 2,770 streetlights, 36,711 T&D structures were visited and/or stray voltage tested, as part of the Company's stray voltage-testing program for 2019. O&R stray voltage tested its transmission system in 2016. Pursuant to the Safety Standards, the Company is required to perform stray voltage testing again in 2021.

The chart below describes all Findings ≥ 1.0 volt identified and mitigated.[5]

Structure Type	*Cause of Voltage*	*Voltages Found ≥ 1 Volt*
Traffic Signal	Control box wiring	1
Street Light	Open Neutral	1
Pole Guy	Open Neutral	3
Pole Ground	Open Neutral	3

[5] Section 1(f) of the Safety Standards defines a Finding as "[a]ny confirmed voltage reading on an electric facility or street light 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."

The Company identified eight findings ≥ 1 volt. The Company immediately safeguarded and permanently mitigated it the same day.

O&R analyzed the testing results of 2019 and determined that the predominant cause of stray voltage findings was open neutrals. O&R continues its quality assurance and control measures by conducting field audits to verify that the system is built to engineering standards.

In accordance with the Safety Standards, when O&R identified a stray voltage finding on the electric facility 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. Regarding the eight stray voltage findings referred to above, the Company identified no nearby structures with stray voltage.

IX. Inspections Results and Analysis

Of the 179,497 electrical structures that comprise O&R's T&D system, O&R inspected 43,579 structures during 2019. The charts below summarize the results of these inspections.

Overhead Distribution Structures

Table of Locations with Deficiencies

Locations Inspected	*Locations w/ Deficiencies	% Locations w/ Deficiencies
28,722	2,357	8.2%

Breakdown of Deficiencies

Level Rating	Number of Deficiencies	% Deficiencies Found
1	45	1.9%
2	461	19.6%
3	1,851	78.5%
Total	**2,357**	**100**

Overhead Transmission Structures

Table of Locations with Deficiencies

Locations Inspected	*Locations w/ Deficiencies	% Locations w/ Deficiencies
7,089	105	1.5%

Breakdown of Deficiencies

Level Rating	Number of Deficiencies	% Deficiencies Found
Level 1	0	0%

Level 2	0	0%
Level 3	105	1.5%
Total	**105**	**1.5%**

Underground Facilities and Pad-mounted Transformers

Table of Locations with Deficiencies

Locations Inspected	*Locations w/ Deficiencies	% Locations w/ Deficiencies
7,296	276	3.8%

Breakdown of Deficiencies

Level Rating	Number of Deficiencies	% Deficiencies Found
Level 1	145	52.5%
Level 2	21	7.6%
Level 3	110	39.9%
Total	**276**	**100%**

Street Lights

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
472	0	0%

Breakdown of Deficiencies

Level Rating	Number of Deficiencies	% Deficiencies Found
Level 1	0	0%
Level 2	0	0%
Level 3	0	0%
Total	**0**	**0%**

- Level 1 Conditions

  In 2019, O&R visually inspected 43,579 structures and identified 190 Level 1 conditions. The Level 1 conditions O&R identified on the overhead distribution system were primarily blown lightening arrestors, floating primary wires, tree limbs on the primary wire, and cracked insulators. The Level 1 conditions O&R identified on the underground distribution system were primarily damaged and/or leaking pad mount transformers, off base >3", and hand holes with damaged covers. O&R identified no Level 1 conditions on the Company's transmission system.

- Level 2 Conditions

  In 2019, O&R identified 482 Level 2 conditions on the T&D system. The majority of the Level 2 conditions on the overhead distribution system are broken cross arms, neutrals/secondary off pin, and vines. The majority of Level 2 conditions on the underground distribution are system hardware corrosion or damage.

- Level 3 Conditions

  In 2019, O&R identified 2,066 Level 3 conditions on the T&D system. O&R identified 105 Level 3 conditions on the transmission system and 1,961 conditions on the distribution system. The majority of Level 3 conditions on the transmission system are wood pole deficiencies, and grounding system conditions. The remaining conditions are related to anchors/guy wires, cross arms, right of way conditions and, insect/woodpecker damage. Of the Level 3 conditions identified on the overhead distribution system, the majority are anchors and guy wire conditions, grounding conditions and conductor conditions. The majority of Level 3 conditions on the underground distribution system are unsecured hand hole covers.

  In an effort to reduce the Level 2 and Level 3 conditions, O&R continues to improve its quality assurance and control so that new construction is built to specification and the National Electrical Safety Code compliance. O&R's distribution line upgrades, capital improvements, defective pole replacement program and transmission and distribution system repair program (completing repairs on conditions identified during the inspection cycles) have resulted in an approximate 36.3% reduction in Level 2 and 3 conditions identified during the 2015 -2019 inspection cycle from the number of Level 2 and 3 conditions identified during 2010 through 2014. The analysis will be updated in 2025 at the completion of the next five-year cycle.

X. Quality Assurance and 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 use of Company resources in an efficient manner.

The O&R Electric QA Program also includes a Corrective Action Documentation and Trending procedure.[6] 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 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 2019. 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 to verify testing and inspection of equipment and the accuracy of data and records.

2019 Quality Assurance and Quality Control Results

The Company's Electric QA Program selectively sampled and retested 1,149 distribution structures. This statistically significant sample size exceeds the 500 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 35,001 - 150,000. The sample selection was distributed across the various structure types, as noted in the table below.

1,149 Structures Sampled

Category	Number of Structures Sampled	Percentage of Sample Size
Overhead Distribution	340	30%
Underground Distribution	588	51%
Street Lights/Traffic Signals	221	19%
Total	**1,149**	**100%**

Of the 1,149 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 3 to this Report, during 2019, O&R received 18 reports from customers regarding a stray voltage or shock hazard. In compliance with the Safety

[6] Details on the O&R Electric QA Program and the Corrective Action Documentation were set forth in the Company's February 18, 2005 filing with the Commission in Case 04-M-0159.

Standards, O&R responded, investigated and mitigated positive findings of shock incidents reported by the public.

Of the 18 incidents that were reported to O&R, 10 cases were substantiated and 8 cases proved to be unsubstantiated. Of the 10 substantiated cases, 3 were attributable to O&R system equipment and 7 were attributable to customer/other utility equipment.

The 8 unsubstantiated cases were a result of faulty customer–owned equipment/wiring or no trouble found upon arrival.

- 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. Identified 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.

Appendix 1

Stray Voltage Testing Summary

Orange & Rockland Utilities, Inc. Data as of 12/31/19	2019 Total System Units	2019 System Units Tested	Percent Completed	Units with Voltage Found (>/= 1.0v)	Percent of Units Tested with Voltage (>/= 1.0v)	*Units Classified as Inaccessible /Not In Field
***Overhead Distribution Facilities	133,730	26,637	19.9%	6	0.02%	697
Underground Distribution Facilities	33,151	7,515	22.7%	0	0%	343
Street Lights / Traffic Signals	2,770	2,559	100%	2	0.08%	211
**Substation Fences	0	0	0	0	0%	0
**Transmission Facilities	0	0	0	0	0%	0
TOTAL	169,651	36,711	21.6%	8	0.02%	1,251

** Structures classified as inaccessible/Not in Field are defined on page 4 of this Report. Facilities that are inaccessible are not considered in determining whether the target has been achieved.*
*** Substation fences and transmission structures were stray voltage tested in 2016. Stray voltage testing is required to be performed again in 2021.*
****133,730 to test but 139,257 to inspect (page 8). Fiberglass and pre-wired wood facilities are deducted because the Company is not required to test them.*

Appendix 2

Summary of Energized Objects

	Initial Readings				Readings after Mitigation		
	1-4.4 V	4.5-24.9 V	> 25 V	Totals	< 1 V	1 V-4.4 V	>4.5 V
Distribution Facilities							
Pole							
Ground	2	1		3	3		
Guy	1	1	1	3	3		
Riser							
Other							
Underground Facilities							
Service Box							
Manhole							
Padmount Switchgear							
Padmount Transformer							
Vault – Cover/Door							
Pedestal							
Other							
Street Lights / Traffic Signals							
Metal Street Light Pole	1			1	1		
Traffic Signal Pole	1			1	1		
Pedestrian Crossing Pole							
Traffic Control Box							
Other							
Substation Fences							
Fence							
Other							
Transmission (Total)							
Lattice Tower							
Pole							
Ground							
Guy							
Other							
Miscellaneous Facilities							
Sidewalk							
Gate/Fence/Awning							
Control Box							
Scaffolding							
Bus Shelter							
Fire Hydrant							
Phone Booth							
Control Box							
Water Pipe							
Riser							
Other							

Appendix 3

Summary of Shock Reports from the Public

	Quarterly Update	Yearly Total
I. Total Shock Calls Received:	**5**	**18**
Unsubstantiated	3	8
Normally Energized Equipment	2	10
Stray Voltage:		
Person	2	9
Animal	0	1
II. Injuries Sustained/Medical Attention Received:	**0**	**3**
Person	0	2
Animal	0	1
III. Stray Voltage Source:	**2**	**10**
Utility Responsibility (Total)	**0**	**3**
Overhead Distribution System	0	2
Underground Distribution System	0	1
Transmission System	0	0
Other Utility/Gov't Agency (Total)	**0**	**0**
Street Light	0	0
Other (Total)	0	0
Customer Responsibility (Total)	**2**	**7**
IV. Stray Voltage Range:	**2**	**10**
1.0V to 4.4V	0	0
4.5V to 24.9V	0	0
25V and above	0	0
Unknown	2	10

Appendix 4

Distribution

Orange & Rockland Utilities Inc.

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

Overhead Facilities

	2015			2016			2017			2018			2019		
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	2	100	0	0	409	0	0	49	0	0	9	0	0	232	0
Repaired in Time Frame	2	99	0	0	408	0	0	48	0	0	9	0	0	37	0
Repaired - Overdue	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	195	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grounding System															
Number of Deficiencies	0	0	271	0	0	829	0	0	104	0	0	191	0	0	223
Repaired in Time Frame	0	0	193	0	0	598	0	0	104	0	0	3	0	0	1
Repaired - Overdue	0	0	78	0	0	231	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	188	0	0	222
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anchors/Guy Wire															
Number of Deficiencies	1	0	135	0	0	112	0	0	89	0	0	53	1	0	128
Repaired in Time Frame	1	0	135	0	0	110	0	0	63	0	0	0	1	0	0
Repaired - Overdue	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	26	0	0	53	0	0	128
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cross Arm/Bracing															
Number of Deficiencies	0	4	69	2	59	3	0	66	4	0	28	0	1	96	0
Repaired in Time Frame	0	4	69	2	56	3	0	60	1	0	28	0	1	31	0
Repaired - Overdue	0	0	0	0	3	0	0	6	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	3	0	0	0	0	65	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riser															
Number of Deficiencies	0	0	1	0	0	1	0	0	1	0	0	16	0	0	125
Repaired in Time Frame	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	1	0	0	16	0	0	125
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Orange & Rockland Utilities Inc.

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

Overhead Facilities

	2015			2016			2017			2018			2019		
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
Conductors															
Primary Wire/Broken Ties															
Number of Deficiencies	19	0	172	12	0	147	18	0	157	3	0	69	19	0	350
Repaired in Time Frame	18	0	171	11	0	147	18	0	139	3	0	5	19	0	16
Repaired - Overdue	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	18	0	0	64	0	0	334
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Wire															
Number of Deficiencies	0	0	3	0	0	2	0	2	9	0	0	4	0	11	236
Repaired in Time Frame	0	0	3	0	0	2	0	1	6	0	0	0	0	10	0
Repaired - Overdue	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	3	0	0	4	0	1	236
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neutral															
Number of Deficiencies	0	1	0	0	5	0	0	16	0	0	11	0	0	22	0
Repaired in Time Frame	0	1	0	0	5	0	0	16	0	0	11	0	0	18	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insulators															
Number of Deficiencies	7	0	0	10	0	0	5	0	0	2	0	0	3	15	1
Repaired in Time Frame	7	0	0	9	0	0	5	0	0	2	0	0	3	15	1
Repaired - Overdue	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Orange & Rockland Utilities Inc.

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

Overhead Facilities

	2015			2016			2017			2018			2019		
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
Pole Equipment															
Transformers															
Number of Deficiencies	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Repaired in Time Frame	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cutouts															
Number of Deficiencies	2	1	0	2	0	0	1	0	0	0	0	0	0	0	0
Repaired in Time Frame	2	1	0	2	0	0	1	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lightning Arrestors															
Number of Deficiencies	31	0	0	37	0	0	41	0	0	8	0	0	18	0	0
Repaired in Time Frame	29	0	0	32	0	0	41	0	0	8	0	0	18	0	0
Repaired - Overdue	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Equipment															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous															
Trimming Related															
Number of Deficiencies	10	2	11	5	3	5	15	23	51	2	9	159	3	85	788
Repaired in Time Frame	10	2	11	5	3	5	15	21	36	2	9	2	3	29	11
Repaired - Overdue	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	15	0	0	157	0	56	777
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** Other**															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Overhead Facilities Total															
Total															
Number of Deficiencies	74	108	662	69	476	1099	81	156	415	15	57	492	45	461	1851
Repaired in Time Frame	71	107	583	62	472	866	81	146	349	15	57	10	45	140	29
Repaired - Overdue	3	1	79	7	4	233	0	10	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	66	0	0	482	0	321	1822
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Transmission

Orange & Rockland Utilities Inc.

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

Transmission Facilities

	2015			2016			2017			2018			2019		
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	0	0	2	0	0	2	0	0	7	0	0	2	0	0	3
Repaired in Time Frame	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	7	0	0	1	0	0	3
Not Repaired - Overdue	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
Poles															
Number of Deficiencies	0	0	47	0	0	40	0	1	13	0	0	12	0	0	20
Repaired in Time Frame	0	0	29	0	0	19	0	1	2	0	0	2	0	0	4
Repaired - Overdue	0	0	10	0	0	10	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	11	0	0	10	0	0	16
Not Repaired - Overdue	0	0	8	0	0	11	0	0	0	0	0	0	0	0	0
Anchors/Guy Wire															
Number of Deficiencies	0	1	9	0	0	6	0	0	4	0	0	3	0	0	5
Repaired in Time Frame	0	1	4	0	0	1	0	0	0	0	0	2	0	0	1
Repaired - Overdue	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	4	0	0	1	0	0	4
Not Repaired - Overdue	0	0	4	0	0	3	0	0	0	0	0	0	0	0	0
Crossarm/Brace															
Number of Deficiencies	0	0	11	0	0	11	0	2	19	0	0	23	0	0	31
Repaired in Time Frame	0	0	6	0	0	6	0	0	6	0	0	6	0	0	4
Repaired - Overdue	0	0	2	0	0	2	0	2	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	13	0	0	17	0	0	27
Not Repaired - Overdue	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Grounding System															
Number of Deficiencies	0	0	42	0	0	56	0	0	23	0	0	25	0	0	13
Repaired in Time Frame	0	0	34	0	0	50	0	0	18	0	0	16	0	0	5
Repaired - Overdue	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	4	0	0	9	0	0	8
Not Repaired - Overdue	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0
Conductors															
Cable															
Number of Deficiencies	0	0	1	0	0	1	0	0	2	0	0	2	0	0	1
Repaired in Time Frame	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1
Not Repaired - Overdue	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Static/Neutral															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Insulators															
Number of Deficiencies	0	0	9	0	0	10	0	0	7	0	0	7	0	0	7
Repaired in Time Frame	0	0	6	0	0	1	0	0	0	0	0	1	0	0	1
Repaired - Overdue	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	4	0	0	6	0	0	6
Not Repaired - Overdue	0	0	3	0	0	8	0	0	2	0	0	0	0	0	0

Orange & Rockland Utilities Inc.

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

Transmission Facilities

	2015			2016			2017			2018			2019		
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
Miscellaneous															
Right of Way Condition															
Number of Deficiencies	0	0	9	0	0	4	0	0	20	0	0	11	0	0	25
Repaired in Time Frame	0	0	6	0	0	2	0	0	9	0	0	7	0	0	1
Repaired - Overdue	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	8	0	0	4	0	0	24
Not Repaired - Overdue	0	0	1	0	0	2	0	0	1	0	0	0	0	0	0
*** Other**															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmission Facilities Total															
Total															
Number of Deficiencies	0	1	130	0	0	130	0	3	95	0	0	85	0	0	105
Repaired in Time Frame	0	1	87	0	0	79	0	1	35	0	0	36	0	0	16
Repaired - Overdue	0	0	16	0	0	20	0	2	3	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	53	0	0	49	0	0	89
Not Repaired - Overdue	0	0	27	0	0	31	0	0	4	0	0	0	0	0	0

Underground Facilities

Orange & Rockland Utilities Inc.

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

Underground Facilities

	2015			2016			2017			2018			2019		
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	3	12	24	12	3	2	17	2	16	5	1	10	40	17	105
Repaired in Time Frame	3	12	24	12	3	1	17	2	5	5	1	2	40	8	0
Repaired - Overdue	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	11	0	0	8	0	9	105
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Damaged Structure															
Number of Deficiencies	1	0	0	3	0	0	1	0	0	1	0	0	4	1	0
Repaired in Time Frame	1	0	0	3	0	0	1	0	0	1	0	0	4	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Congested Structure															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Damaged Equipment															
Number of Deficiencies	0	0	0	1	0	0	8	0	0	1	0	0	2	0	0
Repaired in Time Frame	0	0	0	1	0	0	8	0	0	1	0	0	2	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conductors															
Primary Cable															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Cable															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neutral Cable															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Racking Needed															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Miscellaneous															
*** Other**															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Underground Facilities Total															
Underground Facilities Total															
Number of Deficiencies	4	12	24	16	3	2	26	2	16	7	1	10	46	18	105
Repaired in Time Frame	4	12	24	16	3	1	26	2	5	7	1	2	46	8	0
Repaired - Overdue	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	11	0	0	8	0	10	105
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pad Mount Transformers

Orange & Rockland Utilities Inc.

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

Pad Mount Transformers

	2015			2016			2017			2018			2019		
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	11	0	0	2	0	0	1	0	0	0	0	0	0	2	4
Repaired in Time Frame	11	0	0	2	0	0	1	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Damaged Equipment															
Number of Deficiencies	9	0	0	2	0	0	5	0	0	2	0	0	32	0	0
Repaired in Time Frame	9	0	0	2	0	0	5	0	0	2	0	0	32	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cable Condition															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil Leak															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Off Pad															
Number of Deficiencies	12	0	0	3	0	0	7	0	0	6	0	0	65	0	0
Repaired in Time Frame	12	0	0	3	0	0	7	0	0	6	0	0	65	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lock/Latch/Penta															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous															
*** Other**															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pad Mount Total															
Total															
Number of Deficiencies	32	0	0	7	0	0	13	0	0	8	0	0	99	3	5
Repaired in Time Frame	32	0	0	7	0	0	13	0	0	8	0	0	99	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Street Lights

Orange & Rockland Utilities Inc.

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

Streetlight Facilities

	2015			2016			2017			2018			2019		
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Handhole/Service Box															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Service/Internal Wiring															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Access Cover															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous															
*** Other**															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streetlight Total															
Total															
Number of Deficiencies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired in Time Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Not Due	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Repaired - Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Level IV

Orange & Rockland Utilities Inc.

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

Level IV Facilities	2015		2016		2017		2018		2019	
	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										
Poles										
Pole Condition	909	34	2594	122	1748	55	1775	3	17893	3
Grounding System	3953	168	9646	609	3399	185	3793	37	9723	3
Anchors/Guy Wire	5053	193	8630	407	4471	220	3107	20	2897	1
Cross Arm/Bracing	0	0	0	0	0	0	0	0	0	0
Riser	0	0	0	0	0	0	0	0	0	0
Conductors										
Primary Wire/Broken Ties	0	0	0	0	0	0	0	0	0	0
Secondary Wire	0	0	0	0	0	0	0	0	0	0
Neutral	0	0	0	0	0	0	0	0	0	0
Insulators	0	0	0	0	0	0	0	0	0	0
Conductors										
Transformers	0	0	0	0	0	0	0	0	0	0
Cutouts	0	0	0	0	0	0	0	0	0	0
Lightning Arrestors	0	0	0	0	0	0	0	0	0	0
Other Equipment	0	0	0	0	0	0	0	0	0	0
Miscellaneous										
Trimming Related	0	0	0	0	0	0	0	0	0	0
* Other	0	0	0	0	0	0	0	0	0	0
Overhead Facilities Total	9915	395	20870	1138	9618	460	8675	60	30513	7
Transmission Facilities										
Towers/Poles										
Grounding System	11	3	6	3	7	1	5	0	6	0
Steel Towers	707	29	907	10	716	3	677	1	714	0
Poles	1344	312	1010	172	138	3	107	2	130	1
Anchors/Guy Wire	31	1	34	3	69	1	56	0	45	0
Crossarm/Brace	315	31	253	21	283	8	346	4	359	6
Conductors										
Cable	4	1	0	0	0	0	2	0	3	0
Static/Neutral	0	0	0	0	0	0	0	0	0	0
Insulators	2	0	0	0	2	1	2	0	5	0
Miscellaneous										
Right of Way Condition	144	55	152	24	162	5	215	10	176	5
* Other	0	0	0	0	0	0	0	0	0	0
Transmission Facilities Total	2558	432	2362	233	1377	22	1410	17	1443	12

Orange & Rockland Utilities Inc.

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

Level IV Facilities

	2015		2016		2017		2018		2019	
	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	0	0	2	0	0	0	0	0	1	0
Damaged Structure	322	6	60	0	24	0	12	2	676	0
Congested Structure	0	0	0	0	0	0	0	0	0	0
Damaged Equipment	0	0	0	0	0	0	0	0	0	0
Conductors										
Primary Cable	0	0	0	0	0	0	0	0	0	0
Racking Needed	0	0	0	0	0	0	0	0	0	0
Secondary Cable	0	0	0	0	0	0	0	0	0	0
Neutral Cable	0	0	0	0	0	0	0	0	0	0
Miscellaneous										
* Other	4	0	0	0	4	0	0	0	2326	0
Underground Facilities Total	326	6	62	0	28	0	12	2	3004	0
Pad Mount Transformers										
Pad Mount Transformers										
Damaged Structure	322	6	60	0	24	0	12	2	676	0
Damaged Equipment	0	0	0	0	0	0	0	0	0	0
Cable Condition	0	0	0	0	0	0	0	0	0	0
Oil Leak	0	0	0	0	0	0	0	0	0	0
Off Pad	0	0	0	0	0	0	0	0	0	0
Lock/Latch/Penta	0	0	0	0	0	0	0	0	2	0
Miscellaneous										
* Other	0	0	0	0	0	0	0	0	0	0
Pad Mount Transformer Total	322	6	60	0	24	0	12	2	678	0
Streetlights										
Streetlight										
Base/Standard/Light	0	0	0	0	0	0	0	0	0	0
Handhole/Service Box	0	0	0	0	0	0	0	0	0	0
Service/Internal Wiring	0	0	0	0	0	0	0	0	0	0
Access Cover	0	0	0	0	0	0	0	0	0	0
Miscellaneous										
* Other	0	0	0	0	0	0	0	0	0	0
Streetlight Total	0	0	0	0	0	0	0	0	0	0
Total Level IV Conditions										
Total Overall Total	13121	839	23354	1371	11047	482	10109	81	35638	19

Summary

Orange & Rockland Utilities Inc.

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
2015	I	Within 1 week	110	107	3	0	0
	II	Within 1 year	121	120	1	0	0
	III	Within 3 years	816	694	95	0	27
	IV	N/A	13121	0	0	0	0
2016	I	Within 1 week	92	85	7	0	0
	II	Within 1 year	479	475	4	0	0
	III	Within 3 years	1231	946	254	0	31
	IV	N/A	23354	0	0	0	0
2017	I	Within 1 week	120	120	0	0	0
	II	Within 1 year	161	149	12	0	0
	III	Within 3 years	526	389	3	130	4
	IV	N/A	11047	0	0	0	0
2018	I	Within 1 week	30	30	0	0	0
	II	Within 1 year	58	58	0	0	0
	III	Within 3 years	587	48	0	539	0
	IV	N/A	10109	0	0	0	0
2019	I	Within 1 week	190	190	0	0	0
	II	Within 1 year	483	149	0	334	0
	III	Within 3 years	2066	45	0	2021	0
	IV	N/A	35638	0	0	0	0

Exhibit 1

CERTIFICATION
STRAY VOLTAGE TESTING

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

Francis W. Peverly, on this 11 day of February 2020, certifies as follows:

1. I am the Vice President, Operations of Orange and Rockland Utilities, Inc. ("the Company"), and in that capacity, I make this Certification for the annual period ended December 31, 2019 ("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, December 15, 2008, March 22, 2013 and January 8, 2015 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 publicly accessible metallic street light and traffic signal poles located in public thoroughfares in the Company's service territory ("Street Lights"), and (ii) publicly accessible electric facilities owned by the Company ("Facilities") in conjunction with the facility five-year inspections, as identified through a good faith effort by the Company, for stray voltage ("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, the Company is unaware of any Facilities or Street Lights that were not tested during the annual period.

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.

F W Peverly

Francis W. Peverly

Sworn to before me this 11th day of February, 2020

Notary Public: Paula M. Jeck

PAULA M. JECK
Notary Public, State of New York
No. 01JE6366925
Qualified in Westchester County
My Commission Expires November 6, 2021

CERTIFICATION
FACILITY INSPECTIONS

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

Francis W. Peverly, on this 11 day of February 2020, certifies as follows:

1. I am the Vice President, Operations of Orange and Rockland Utilities, Inc. ("the Company"), and in that capacity I make this Certification for the annual period ended December 31, 2019 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, December 15, 2008, March 22, 2013 and January 13, 2015 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 its electric facilities ("Facilities"), as identified through a good faith effort by the Company, 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 for the annual period. Except for structures that are identified as inaccessible in the Company's Annual Report, submitted herewith, the Company is unaware of any Facilities or Street Lights that were not inspected during the annual period.

Francis W. Peverly

Sworn to before me this 11th day of February, 2020

Notary Public:

Paula M. Jeck

PAULA M. JECK
Notary Public, State of New York
No. 01JE6366925
Qualified in Westchester County
My Commission Expires November 6, 2021