

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on March 14, 2013

COMMISSIONERS PRESENT:

Garry A. Brown, Chairman  
Patricia L. Acampora  
Maureen F. Harris  
James L. Larocca  
Gregg C. Sayre

CASE 04-M-0159 – Proceeding on Motion of the Commission to Examine the Safety of  
Electric Transmission and Distribution Systems

ORDER GRANTING PETITION IN PART AND MODIFYING  
ELECTRIC SAFETY STANDARDS

(Issued and Effective March 22, 2013)

BY THE COMMISSION:

The Commission's Electric Safety Standards have been in place since January 2005 and were revised in 2005 and 2008.<sup>1</sup> In a petition dated September 20, 2012, Central Hudson Gas & Electric Corporation (CHGE), Consolidated Edison Company of New York, Inc. (Con Edison), New York State Electric & Gas Corporation (NYSEG), Niagara Mohawk Power Corporation d/b/a National Grid (National Grid), Orange and Rockland Utilities, Inc. (ORU), and Rochester Gas and Electric Corporation (RGE) (Joint Petitioners) requested that the Commission modify the Electric Safety

---

<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)(January 2005 Order); Case 04-M-0159, supra, Order on Petitions for Rehearing and Waiver (issued July 21, 2005)(July 2005 Order); Case 04-M-0159, supra, Order Adopting Changes to Electric Safety Standards (issued December 15, 2008)(December 2008 Order).

Standards (Standards). In the filing, the Joint Petitioners proposed the following revisions to the Standards: 1) the Standards should contain definitions for “contact voltage” and “stray voltage,” and the terminology of the Standards should reflect the distinction between these two types of voltage; 2) require that overhead distribution facilities, underground residential distribution (URD) facilities, overhead and underground transmission structures, and substation fences be tested for stray voltage during mandated inspections on a five-year cycle rather than tested annually; 3) require only external visual inspections of URD pad mounted transformers; and, 4) modify the existing Performance Mechanisms for investor-owned utilities to reset the negative revenue adjustments to no more than 10 basis points in equity earnings. In support of its proposals, the Joint Petitioners included white papers drafted by a utility working group that provide analysis and justification for the proposals.

Pursuant to State Administrative Procedure Act (SAPA), §202(1) notice of the petition was published in the State Register on October 10, 2012. The comment period expired on November 26, 2012 and no comments were received.

### BACKGROUND

In the January 5, 2005 Order, we adopted a set of Electric Safety Standards that established proactive steps for ensuring the safety of the public from stray voltage and enhancing the reliability of the electric systems in the State of New York. The Standards include: (1) annual stray voltage testing of electric facilities accessible to the public using qualified voltage detection devices; (2) inspections of utility electric facilities on a minimum of a five-year cycle; (3) recordkeeping, certification, quality assurance and reporting requirements; and, (4) adoption of the National Electric Safety Code as the minimum standard governing utility construction, maintenance, and operations. The Standards also require that where a utility finds stray voltage, it must immediately make the facility safe and repair it within 45 days. In order to ensure compliance with the Standards, a performance mechanism was introduced that imposes

on each investor-owned utility a negative revenue adjustment of 75 basis points for failure to complete required testing and inspection targets on an annual basis.

In the July 2005 Order, we modified certain aspects of the Standards in response to a joint petition for rehearing from Central Hudson, NYSEG, National Grid, and RGE, and individual petitions from NYSEG, RGE and ORU. The July 2005 Order extended the initial date for testing of overhead distribution and transmission facilities, including substations, for electric utilities other than Con Edison. Additionally, the requirements for certification of the test results by a company officer were clarified and the need for interior inspections of fiberglass hand holes was eliminated.

In the December 2008 Order, we approved several substantive revisions to the Standards. For stray voltage testing, these included adoption of a lower stray voltage testing threshold, improved reporting protocols, and a mandate to perform mobile testing in all cities with populations of 50,000 or more. For inspections, defined repair categories were adopted along with enhanced reporting requirements with a requirement to better track and eliminate temporary repairs.

In addition, Department of Public Service staff (Staff) has engaged in an ongoing collaborative effort with the utilities to identify possible areas in which the Standards could be streamlined without compromising public safety. During this process several proposals were discussed and general consensus was reached on several possible revisions. Subsequent to this effort and after further deliberation by the utilities this petition was filed.

#### DESCRIPTION AND DISCUSSION OF ISSUES

The following sections describe in detail the proposals contained in the joint petition. Each section addresses the proposals and provides a discussion including the final recommendations. The Appendix contains the version of the Standards that reflects the modifications discussed herein.

### Definition of Stray Voltage

Joint Petitioners propose that the Standards be modified to include separate and distinct definitions of “stray voltage” and “contact voltage,” as follows:

- Contact Voltage: A confirmed voltage reading greater than or equal to 1 volt measured using a volt meter and 500 ohm shunt resistor that is the result of abnormal power system conditions.
- Stray Voltage: A confirmed voltage reading greater than or equal to 1 volt measured using a volt meter and 500 ohm shunt resistor that is the result of the normal delivery and/or use of electricity.

Joint Petitioners contends that the Safety Standards utilize the term “stray voltage” to describe abnormal system conditions that create a hazard to the public and require mitigation. They further state that a more accurate reference would be to designate these conditions as “contact voltage,” while adding a definition to distinguish them from “stray voltage,” which historically has been encountered by farm livestock at contact points and at swimming pools, which in both cases arise from the normal operation of the distribution system. Finally, the Joint Petitioners claim that “stray voltage” is a consequence of normal electric system operation and is not necessarily hazardous. In support of their proposal, they cite a proposed IEEE standard (IEEE P1695 – Voltages at Publicly and Privately Accessible Locations) that has similar definitions.

### Discussion

This issue was first raised during the initial adoption of the Standards and we made the determination at that time a separate definition was unnecessary. In the January 2005 Order, we stated the following:

“Some parties express concern that the term “stray voltage” does not properly describe the situation our safety standards primarily address. For example, Central Hudson Gas & Electric Corporation (Central Hudson) suggests that the term “stray voltage” is not precise because it also refers to naturally occurring phenomena; it suggests that we use the term “errant voltage,” instead. Central Hudson is correct that in different contexts the term “stray voltage” can have different meanings. In this proceeding we have consistently used that term to

mean voltage conditions on electric facilities that should not ordinarily exist. These conditions may be due to one or more factors, including, but not limited to, damaged cables, deteriorated, frayed or missing insulation, improper maintenance, or improper installation. The public has also understood the term to have this meaning as it relates to the matters discussed in this Order. Therefore, the concerns are noted, but we will continue to use the term “stray voltage” to refer to the condition addressed by the safety standards.”<sup>2</sup>

The existing terminology has been in place for eight years and has been accepted through common usage, and we see no compelling rationale for implementing a change at this juncture. Furthermore, the Joint Petitioners’ citation to the proposed IEEE standard P1695 as a justification for adopting their proposed definitions and terminology is not persuasive. The IEEE standard is only a proposal and has not been adopted by the IEEE despite the fact that it has been a pending proposal for several years. Without this standard in final form and adopted by IEEE, using it as a reference source for such modification is premature. With respect to the contention that “stray voltage” is not necessarily hazardous, we are concerned that a potentially unsafe condition will be dismissed and not fully investigated if it is categorized as “stray voltage,” resulting in an unacceptable risk to public safety.

During discussions with the utilities during the informal collaborative process mentioned above, Staff requested that the utilities provide, in conjunction with the proposed definition of terms, clear guidelines for classification and mitigation for “stray” vs. “contact” voltage findings. The guidelines have not been provided, nor included in the joint petition. As a result, we will not consider this proposal at this time.

#### Revise the Stray Voltage Testing Cycle

Joint Petitioners propose that the Standards be modified to remove the requirement that certain facilities be tested annually and to require, instead, that overhead distribution facilities, underground residential distribution (URD) facilities, overhead and underground transmission structures, and substation fences be tested during the periodic

---

<sup>2</sup> January 2005 Order at 3.

system inspections that are conducted on a five-year cycle. Streetlights and underground distribution facilities will continue to be tested annually.

As justification, Joint Petitioners presents statistics detailing the historic low rates of findings, and the fact that confirmed shock reports attributed to these facilities has declined since the first two to three years since we implemented the Standards and any annual fluctuation reflects only a slightly declining trend over the last several years.

#### Discussion

The data provided by Joint Petitioners indicates that the rate of findings resulting from manual testing of the facilities referenced above has remained consistently low over the last several years. The data indicates that the rate for the years 2007-2011 is 0.0257%, 0.0145%, 0.0328%, 0.079%, and 0.049%, respectively. Clearly this rate does not constitute a significant level of detection and provides adequate justification in itself to warrant consideration of a revision to the Standards.

It is also important to examine the population of confirmed shock reports. For overhead distribution facilities, the Joint Petitioners list 53 confirmed cases in 2007, 59 in 2008, 50 in 2009, 67 in 2010 and 60 in 2011, and a closer examination of the data indicates that the vast majority of these cases were attributable to customer, not utility, owned facilities. This seems to be a good indicator of whether or not continued annual testing is warranted. Since the rate of findings is consistently low, coupled with the fact that most shock reports are not related to utility facilities, we can now conclude that the annual testing, when evaluated in conjunction with its cost, offers little public safety benefits. Staff also reports that the utilities have included a stray voltage test in their procedures which require workers to perform a stray voltage test prior to commencing work on any utility facilities. These new procedures mean that thousands of facilities are tested on an annual basis during the utilities' routine work on their systems. It is also worth noting that many of the facilities that are subject to manual testing are located in rural and semi-rural areas that experience little or no pedestrian traffic, which significantly reduces the associated exposure risk. Joint Petitioners also report that the

estimated annual cost savings resulting from revising the testing intervals will be approximately \$8 million (total for all electric utilities). The data demonstrates to us that Joint Petitioners proposal should be adopted and the Standards shall be revised accordingly, subject to the condition discussed below.

Since this modification to the Standards will save electric utilities an estimated \$8 million per year, we will require that the savings be captured for ratepayers. While some rate plans for the electric utilities do specifically provide for deferral of such savings (for example, Central Hudson), other rate plans do not provide for deferral mechanisms for savings resulting from modifications to the Standards and still other utilities may not be subject to current rate plans. Therefore, to ensure that all utilities are treated in a similar fashion and to ensure that ratepayers are not charged for work that is no longer required by us pursuant to the Standards, we direct that, as a condition to being permitted to follow the Standards for the stray voltage testing cycle as modified herein, each investor-owned utility and municipal electric utility whose rate plan does not address the disposition of savings flowing from compliance with the Standards defer for customer benefit, at the other customer capital rate, all savings resulting from the modified Standards.<sup>3</sup> These deferrals will be addressed in each utility's next rate filing, or as otherwise determined by us on a case-by-case basis.

Exempt Pad-Mounted URD Transformers from Requirements for Internal Inspection

The inspection requirements currently in the Standards require visual inspection of all equipment components unless they are encased in a sealed compartment. As a result, all pad-mounted URD transformers must undergo an internal inspection, which necessitates the deployment of qualified personnel and consequently involves additional time and resources than an external inspection. Joint Petitioners propose that the Standards be revised to exempt this class of equipment from internal inspection and to

---

<sup>3</sup> Electric utilities that do not defer cost savings flowing from our modifications to the Standards shall continue to comply with the prior Standards and are directed to provide written notice to the Secretary to the Commission as to their decision within 30 days of issuance of this Order.

require only an external inspection. As justification, Joint Petitioners states that from 2009 to 2011 11,648 deficiencies were discovered on this equipment with only 1,481 (12.7%) resulting from internal inspection.

### Discussion

Joint Petitioners also point out that the external inspection “readily discovers the transformer conditions that could affect public safety or reliability such as displacement from the transformer base caused by external forces (snow plows, automobiles, and lawn mowers) and missing or broken locks that could allow unauthorized access.” Given our goal of ensuring public safety and electric reliability, we are particularly interested and focused on the inspections that result in those findings. Signs of damage or defects that could possibly result in a public safety concern would certainly be discovered upon an external inspection. In addition, pad mounted URD transformers are locked to prevent access by homeowners or pedestrians, and would qualify as a “sealed compartment” for the purposes of the Standards. In addition, of the 1,481 deficiencies identified by internal inspection from 2009-2011, 1,442 of those were discovered by Con Edison, and those were attributed to a corporate construction specification change that necessitated the repairs.

These arguments, coupled with the low rate of defects discovered through internal inspections, are persuasive. Therefore, we will amend the Standards to exempt pad-mounted URD transformers from internal inspections.

### Performance Mechanism Revenue Adjustment

The Joint Petitioners propose that the revenue adjustment associated with failure to achieve stated targets detailed in the Standards be lowered from 75 to 10 basis points. In support of the proposal, they claim that the original intent of the revenue adjustment, to set the level “in excess of the estimated costs of compliance thereby averting the possibility that a utility may determine that it is more economic to pay the adjustment than comply with the safety standards,” is no longer necessary given the fact that compliance with the Standards has become an established operating practice at each



company over the past seven years and there have been no instances of the penalty being assessed. Joint Petitioners derives its basis point proposal from what it claims is a level that is commensurate with mechanisms incorporated into performance based rate plans for reliability and customer service.

### Discussion

The Joint Petitioners' are correct that, as discussed in the January 2005 Order, our intent in setting the basis point level was to ensure that the penalties resulting from noncompliance would not be more economic than complying with the Standards.<sup>4</sup> There were concerns at that time as to whether the utilities would be able and willing to devote the necessary resources to comply with the Standards, and severe penalties were enacted to ensure compliance.

In light of the important public safety issues addressed by the Standards and the ramifications of possible non-compliance, we do not find that a reconsideration of the current levels is warranted at this time. The potential exposure to negative revenue adjustments provides an incentive for the utilities to continue their commitment to the program going forward. It is also worth noting that the Moreland Commission, imppaneled by the Governor in the wake of Superstorm Sandy, has recommended augmenting and streamlining our ability to levy penalties on utilities for failure to provide safe and reliable service. Relaxation of the performance mechanism as a policy matter, coupled with the public safety concerns, is not advisable at this time. Finally, changing the negative revenue adjustment would generally require us to modify the electric rate plans for the utilities, which we do not believe would be appropriate. As a result we will deny the Joint Petitioner's request.

---

<sup>4</sup> January 2005 Order, at 41.

### CONCLUSION

The requirements of the Electric Safety Standards have resulted in the identification of locations with significant stray voltage levels where mitigation was necessary to maintain public safety, and the equipment inspection requirements provide for the proactive discovery of defects and improved system maintenance. The modifications to the Standards discussed in the body of this Order are justified through experience gained and data accumulated over the past seven years, and we believe that they can be effectively implemented without compromising public safety.

#### The Commission orders:

1. The standards discussed in the body of this Order and detailed in the Appendix are adopted, subject to the requirements and conditions contained in the body of this Order.
2. As a condition to using the modified stray voltage testing cycle for certain facilities, as discussed in the body of this Order, each investor-owned utility and municipal electric utility whose rate plan does not address the disposition of savings flowing from compliance with the Electric Safety Standards shall defer for customer benefit, at the other customer capital rate, all savings resulting from the modified Electric Safety Standards.
3. Electric utilities that do not defer cost savings flowing from our modifications to the Electric Safety Standards stray voltage testing cycle for certain facilities, as discussed in the body of this Order, shall continue to comply with the prior Electric Safety Standards and are directed to file within 30 days of issuance of this Order written notice to the Secretary as to their decision.
4. The Secretary is authorized to extend the deadlines set forth in this order.

5. This proceeding is continued.

By the Commission,

(SIGNED)

JEFFREY C. COHEN  
Acting Secretary

# ELECTRIC SAFETY STANDARDS

## SECTION 1: DEFINITIONS

(a) Utilities – The term "utilities" includes all investor-owned and municipal electric corporations subject to the Commission's jurisdiction that own or operate transmission or distribution facilities, whether fully or lightly regulated. As appropriate, the term also includes companies subject to our jurisdiction that own or operate electric generating facilities within the State, whether fully or lightly regulated.

(b) Electric facilities – The term “electric facilities” means and refers to all electric plant, as that term is defined in Public Service Law §2(12), that is used to modulate, transmit, and/or distribute electricity, or is related to its modulation, transmission, and/or distribution. The term “overhead facilities” generally includes the electric facilities that are part of a utility’s overhead distribution system (e.g., the system that serves rural areas and includes towers, poles, and aerial cable and conductors). The term “underground facilities” generally includes the electric facilities that are part of a utility’s underground distribution system (e.g., the system that serves urban areas and includes manholes, service boxes, and underground cable and conductors).

(c) Stray Voltage –The term “stray voltage” means voltage conditions on electric facilities that should not ordinarily exist. These conditions may be due to one or more factors, including, but not limited to, damaged cables, deteriorated, frayed or missing insulation, improper maintenance, or improper installation.

(d) Streetlights – The term “streetlights” means and includes utility- and municipal owned streetlights located on, along, or adjacent to public thoroughfares and areas and traffic signal poles and devices; it does not include privately-owned light fixtures, such as those located in private parking lots.

(e) Stray Voltage Testing – The process of checking an electric facility for stray voltage using a device capable of reliably detecting and audibly and/or visually signaling voltage in the range of 6 to 600 volts.

(f) Findings – Any confirmed voltage reading on an electric facility or streetlight greater than or equal to 1V measured using a volt meter and a 500 ohm shunt resistor.

(g) Mitigation –Corrective actions performed by the utility to address the stray voltage findings.

(h) Inspection – A careful and critical examination of an electric facility by a qualified individual to determine the condition of the facility and the potential for it to cause or lead to safety hazards or adverse effects on reliability.

## SECTION 2: NATIONAL ELECTRIC SAFETY CODE COMPLIANCE

- (a) The installation, construction, maintenance, and operation of electric facilities shall comply with the latest version of the National Electric Safety Code (NESC), except where a utility's practices, procedures, and protocols are more stringent.
- (b) Utilities are not required to retrofit their existing facilities to comply with the latest version of the NESC, unless the latest version of the NESC requires a retrofit.
- (c) To the extent that projects currently being constructed do not comply with the NESC or a utility's more stringent standards, exemption from compliance will be considered on a case-by-case basis.
- (d) If a utility believes that it cannot satisfy any provision of the NESC for a valid technical reason, it may petition the Commission for an exemption from compliance with that provision.

## SECTION 3: STRAY VOLTAGE TESTING

- (a) Stray voltage testing shall be conducted on all utility facilities that are capable of conducting electricity and are publicly accessible. Testing is not required on customer meters and customer-owned facilities, except municipal-owned streetlights.
- (b) Stray voltage testing shall be conducted on all streetlights on an annual basis.
- (c) For underground electric facilities that are publicly accessible, including, but not limited to, manholes, service boxes, and transformer vaults, stray voltage testing shall be conducted on the exposed surfaces of the facilities. Handholes that are constructed of fiberglass or other non-conductive materials need not be tested.
- (d) Stray voltage testing of streetlights shall be conducted when the light is activated (i.e., at night).
- (e) Stray voltage testing shall be conducted on an annual basis for all underground electric facilities that are publicly accessible, including, but not limited to, manholes, service boxes and transformer vaults. Testing shall be conducted on overhead distribution facilities, underground residential distribution facilities, overhead and underground transmission facilities, and substation fences at least once every five years. This testing may be conducted concurrently with the facility inspection required in Section 4 of these standards.
- (f) If a streetlight to which a utility provides service is owned by another entity, and that entity conducts stray voltage testing meeting these safety standards, the utility may substitute that testing program for its own, provided the utility can certify the other entity's results.
- (g) All equipment used for stray voltage testing must be certified by an independent test laboratory as being able to reliably detect voltages of 6 to 600 volts.

(h) Any facility for which a voltage finding is discovered shall be guarded by the utility immediately and continuously until the utility has performed mitigation and made the area safe. Mitigation shall be completed on any stray voltage findings.

(i) In instances where a stray voltage finding is determined to be caused by customer-owned equipment, the area must be immediately made safe. The utility shall immediately notify the customer or a responsible person associated with the premises or the customer-owned facility of the unsafe condition and the need for the customer to arrange for a permanent repair to the customer's equipment.

(j) In the event of a finding on an electric facility or streetlight during stray voltage testing, the utility shall test for stray voltage on all publicly accessible structures and sidewalks within a minimum 30 foot radius of the electric facility or streetlight.

(k) In each instance where stray voltage is determined to be caused by a utility-owned facility, best efforts shall be used to effect a permanent repair of the facility as soon as possible, but not later than 45 days after discovery of the stray voltage condition. A temporary repair to the facility may remain in place for more than 45 days only in extraordinary circumstances, and in such event the utility shall periodically perform site visits to monitor the condition of the temporary repair. All exceptions must be identified and justified as part of the reporting requirements under Section 9.

#### SECTION 4: INSPECTIONS

(a) Inspections shall include, at a minimum, visual examination of towers, poles, guy wires, risers, overhead cables and conductors, transformers, breakers, switches, and other aboveground equipment and facilities, and of the interior of manholes, service boxes, vaults, and other underground structures. Where debris or water is found in an underground structure, it must be removed before commencing the inspection so that all of the facilities in the structure, and the structure itself, may be fully inspected. Fiberglass handholes and pad-mounted transformers used in underground residential distribution systems are exempt from the interior inspection requirement.

(b) Inspection of equipment should be performed in a manner that allows the inspector to examine its components, except those that are ordinarily encased in sealed compartments. Utilities need not perform destructive testing as part of this inspection program, except as otherwise required by their more intensive inspection procedures.

(c) When a visual inspection indicates the need for a more intensive examination, the utilities shall perform infrared testing and/or other inspection procedures.

(d) When an inspection reveals a hazardous condition or other problem, whether related to stray voltage or otherwise, the utility must make all repairs necessary to eliminate the condition.

(e) All electric facilities shall be inspected at least once every five years. Certain facilities may warrant shorter inspection cycles.

(f) Each utility shall develop and implement a formal inspection program that complies with these safety standards.

(g) Inspections conducted during routine maintenance and other work not directly related to the inspection program may count as an inspection visit, provided that the inspection is performed using the same safety and reliability criteria and to the same extent as would otherwise be required under these standards. Inspections occurring during these field visits must be properly documented and certified.

(h) This inspection requirement is intended to complement, not supplant, the inspections any utility already performs; to the extent a utility's inspection program is broader or more intensive than the program described herein, the utility should continue to follow its own program.

(i) The testing and inspection programs may be combined, where practical and feasible, provided the synergy satisfies all the requirements contained within these safety standards.

(j) As part of the inspection process, deficiencies identified shall be categorized by the time period for the repair based on the severity of the condition. When prioritizing deficiencies, utilities should carefully account for the safety and operational effects should the facility fail prior to repair. Utilities will prioritize deficiencies by three categories:

Level I – repair as soon as possible but not longer than one week. A Level I deficiency is an actual or imminent safety hazard to the public or poses a serious and immediate threat to the delivery of power. Critical safety hazards present at the time of the inspection shall be guarded until the hazard is mitigated.

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

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

Level IV – condition found but repairs 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.

(k) Utilities are expected to permanently repair deficiencies identified by the inspection program within the priority time period established for its classification. All repair time periods are based on the initial date of discovery.

(l) When a temporary repair is located during an inspection or made by the company, best efforts shall be used to affect a permanent repair of the facility within 90 days. A temporary repair to the facility may remain in place for more than 90 days only in extraordinary circumstances, which may include major storms that require significant

repair activity. In such event, the utility shall periodically perform site visits to monitor the condition of the temporary repair. All exceptions must be identified and justified as part of the reporting requirements under Section 9.

### SECTION 5: QUALITY ASSURANCE

Each utility shall develop a quality assurance program to ensure timely and proper compliance with these safety standards. The quality assurance program shall be independent of the stray voltage testing and visual inspection programs. The management and personnel performing quality assurance activities shall be separate from those performing the required stray voltage testing and inspections.

(a) With regard to inspections, the quality assurance program should ensure that inspections are being performed on all facilities and that deficiencies are being properly identified and categorized for repair. The program should also verify that permanent repairs are made and the timeliness of the repairs.

### SECTION 6: RECORDKEEPING

(a) Each utility shall develop procedures and protocols to track the stray voltage testing dates and results for each electric facility.

(b) Each utility shall develop procedures and protocols to track the inspection dates and results for each electric facility.

(c) Each utility shall develop procedures and protocols to track the permanent repairs made based on inspection data and whether the repairs were made in the appropriate timeframe. An inventory of outstanding repairs by priority level should also be maintained.

(d) Each utility shall develop procedures and protocols to track temporary repairs made on the system and whether these locations were permanently repaired within 90 days after making or locating a temporary repair.

(e) These records shall be kept in a manner that is readily accessible and searchable, continuously updated, and subject to review and audit by Staff and the Commission.



## SECTION 7: CERTIFICATION

- (a) Written certification of the completion and results of every stray voltage test and inspection undertaken and that all unsafe conditions identified have been remediated shall be made by an appropriate utility employee.
- (b) The President or officer of each utility with direct responsibility for overseeing stray voltage testing shall provide an annual certification to the Commission that the utility exercised due diligence in carrying out a plan designed to meet the stray voltage testing requirements, including quality assurance, and, to the best of the officer's knowledge, the utility has tested all of its publicly accessible electric facilities and streetlights, except those identified in the February 15 report.
- (c) The President or officer of each utility with direct responsibility for overseeing facility inspections shall provide an annual certification to the Commission that the utility has exercised due diligence in carrying out a plan designed to meet the inspection requirements, including quality assurance, and, to the best of the officer's knowledge, the utility has inspected the requisite number of electric facilities. Additionally, at the end of five-year inspection cycle, the officer shall certify that the utility has exercised due diligence in carrying out a plan designed to meet the inspection requirements, including quality assurance, and, to the best of the officer's knowledge, the utility has inspected all of its electric facilities during the previous five year period, except those identified in the February 15 report.
- (d) Each utility shall maintain its written certifications and other documentary proof of its testing and inspections at its corporate office located within the State of New York. These documents shall be available to the public for review upon request and without conditions.

## SECTION 8: NOTIFICATION REQUIREMENTS

Each utility shall comply with the Event Notification Requirements attached hereto.

## SECTION 9: REPORTING REQUIREMENTS

- (a) Each utility shall file a comprehensive report by February 15 each year that:
  - 1. details the results of stray voltage tests and inspections conducted over the 12-month period ending December 31 of the prior calendar year;
  - 2. addresses the performance mechanism specified in Section 10;
  - 3. contains the certifications described in Section 7;
  - 4. contains a breakdown of the voltage findings in a tabular format as detailed in Attachment 1; for all findings that result in a reading of 1 V or more after completion of mitigation efforts, the utilities shall provide a detailed report on those efforts;

5. contains a breakdown of the shock reports received from the public as detailed in Attachment 2;
6. discusses the analyses undertaken on the causes of stray voltage within the utility's electric system, the conclusions drawn there from, the preventative and remedial measures identified, and the utility's plans to implement those measures;
7. describes the priority levels used to gauge the severity of a deficiency, including repair timeframes, and details the requirements for training personnel to properly identify and categorize deficiencies;
8. contains a breakdown of facilities to be inspected, unique inspection conducted per year, and the cumulative number of unique inspections conducted to meet the five year requirement;
9. contains a breakdown of the deficiencies found, permanent repair actions taken by year, whether the repair was completed within the required timeframe, and the number of deficiencies awaiting repair. The information should be provided on a yearly basis by priority level and by equipment groupings as detailed in Attachment 3;
10. contains a review and analysis of the inspection results. Areas of concern should be identified along with remedial actions or future plans to alleviate inadequacies in current programs or assets;
11. describes the quality assurance program and provides the results from quality assurance activities conducted during the year; and
12. Includes all other information that is pertinent to the issues addressed by the safety standards.

#### SECTION 10: PERFORMANCE MECHANISM

- (a) The annual performance target for stray voltage testing shall be 100% of all electric facilities and streetlights that must be tested. Facilities that are inaccessible and which pose no risk to public health and safety will not be considered in the determination of whether the target has been achieved.
- (b) Failure to achieve the annual performance target for stray voltage testing shall result in a rate adjustment of 75 basis points.

(c) The annual performance target for inspections shall be based on the percentage of the average number of electric facilities that must be inspected each year in order to comply with the five-year inspection cycle. That is, the target is based on the one-fifth of the total number of the utility's electric facilities. The specific targets will be as follows:

First year inspection goal 85% of annual target

Second year inspection goal 90% of annual target

Annual inspection goal thereafter 95% of annual target

Fifth year inspection goal 100% of all facilities to be inspected

(d) Failure to achieve the annual performance target for inspections shall result in a rate adjustment of 75 basis points.

## ATTACHMENT 1

## 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
<b>Distribution Facilities</b>							
Pole							
Ground							
Guy							
Riser							
Other							
<b>Underground Facilities</b>							
Service Box							
Manhole							
Padmount Switchgear							
Padmount Transformer							
Vault – Cover/Door							
Pedestal							
Other							
<b>Street Lights / Traffic Signals</b>							
Metal Street Light Pole							
Traffic Signal Pole							
Pedestrian Crossing Pole							
Traffic Control Box							
Other							
<b>Substation Fences</b>							
Fence							
Other							
<b>Transmission (Total)</b>							
Lattice Tower							
Pole							
Ground							
Guy							
Other							
<b>Miscellaneous Facilities</b>							
Sidewalk							
Gate/Fence/Awning							
Control Box							
Scaffolding							
Bus Shelter							
Fire Hydrant							
Phone Booth							
Control Box							
Water Pipe							
Riser							
Other							

## ATTACHMENT 2

## Summary of Shock Reports from the Public

<b>I. Total shock calls received:</b>  <b>Unsubstantiated</b> <b>Normally Energized Equipment</b> <b>Stray Voltage:</b> Person Animal	
<b>II. Injuries Sustained/ Medical Attention Received</b>  Person Animal	
<b>V. Voltage Source:</b>  <b>Utility Responsibility</b> Issue with primary, joint, or transformer Secondary Joint (Crab) SL Service Line Abandoned SL service line Defective service line Abandoned service line OH Secondary OH Service OH Service neutral Pole Riser Other <b>Customer Responsibility</b> Contractor Damage Customer Equipment/Wiring <b>Other Utility/Gov't Agency Responsibility</b> SL Base Connection SL Internal Wiring or Light Fixture Overhead Equipment Other	
<b>VI. Voltage Range:</b>  1.0V to 4.4V 4.5V to 24.9V 25V and above	

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process							
Year	Priority Level / Repair Expected		Deficiencies Found (Total)	Repaired In Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired - Overdue
2009	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2010	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2011	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2012	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2013	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					