BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advanced Notice of Proposed Rulemaking for Revision of 52 Pa. Code Chapter 57 Pertaining to Adding Inspection and Maintenance Standards for the Electric Distribution Companies	:	Docket No. L-00040167

COMMENTS OF THE OFFICE OF CONSUMER ADVOCATE

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APPENDICES

I. INTRODUCTION

On December 11, 2004, the Advanced Notice of Proposed Rulemaking for revisions to 52 Pa. Code Chapter 57 pertaining to adding Inspection and Maintenance Standards for Electric Distribution Companies ("ANOPR") was published in the *Pennsylvania Bulletin*. Through the ANOPR, the Commission is seeking comment on whether the Commission should adopt specific inspection and maintenance standards, and if so, what standards should be put in place. The Commission notes that the statutory requirement of Section 2802(20) of the Public Utility Code (66 Pa.C.S. §2802(20)) as well as new information arising out of the blackout in August 2003 formed the basis for evaluating the need for inspection and maintenance standards in Pennsylvania. Section 2802(20) provides:

> (20) Since continuing and ensuring the reliability of electric service depends on adequate generation and on conscientious inspection and maintenance of transmission and distribution systems, the independent system operator or its functional equivalent should set, and the commission shall set through regulations, inspection, maintenance, repair and replacement standards and enforce those standards.

66 Pa.C.S. §2802(20).

The OCA submits that pursuant to Section 2802(20), the Commission must establish regulations regarding the inspection, maintenance, repair and replacement standards for the distribution and transmission systems operated by Pennsylvania electric distribution companies ("EDCs"). The OCA fully supports the Commission's efforts in this regard, particularly in light of the August 14, 2003 Blackout. As the Final Report of the U.S.-Canada Power System Outage Task Force on the causes of the Blackout concluded, one of the causes of the August 14, 2003 Blackout was inadequate vegetation management practices. *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and*

Recommendations, Report at 19-20 (April 2004)(Final Report). One of the key recommendations of Final Report was that clear, unambiguous and enforceable standards be developed pertaining to vegetation management programs by the appropriate state and federal agencies. *Final Report* at 154, 199.

The North American Electric Reliability Council ("NERC") reached the same conclusion in a Report issued July 13, 2004. *Technical Analysis of the August 14, 2003 Blackout: What Happened, Why, and What Did We Learn?*, Report to the NERC Board of Trustees by the NERC Steering Group (July 13, 2004)(NERC Report). In its Report, the NERC Steering Group also noted that ineffective vegetation management practices contributed to other large-scale blackouts like the one that occurred on July 2-3, 1996 in the West. *NERC Report* at 105-106.

Additionally, the Report commissioned by the Federal Energy Regulatory Commission ("FERC") on utility vegetation management practices concluded that oversight of vegetation management practices was inadequate. *Utility Vegetation Management Final Report*, CN Utility Consulting, LLC., Report at 68 (March 2004)(CNUC Report). The CNUC Report concluded that regulatory agencies develop measurable and achievable program objectives to reduce the likelihood of tree and power line conflicts. Id. at 68-69. In response to the CNUC Report, FERC issued a Report and Recommendations on September 7, 2004 calling for, among other things; 1) Congress to enact legislation to make the standards of an Electric Reliability Organization mandatory and enforceable; 2) NERC to complete its standards quickly; and 3) state regulators, through NARUC and other similar organizations, and the utility industry to develop model guidelines and educational materials. *Utility Vegetation Management and Bulk*

Electric Reliability Report from the Federal Energy Regulatory Commission, Report at 17-19 (September 7, 2004).

Some states also have regulations or guidelines for inspection and maintenance of transmission and distribution systems. From a preliminary review of other states, the OCA has identified Orders or regulations in California, Ohio and New York that have established inspection and maintenance standards. California adopted inspection requirements in 1997 through General Order 165. Re Pacific Gas and Electric Co.; Re Electric Distribution Facility Standard Setting, 71 CPU2d 471, Decision No. 97-03-070, 1997 Cal. PUC LEXIS (March 31, 1997)(General Order 165). General Order 165 provides specific inspection cycles for various types of electric distribution facilities and equipment. The General Order is quite detailed in that it differentiates between urban and rural inspections and sets forth various levels of inspections such as patrol, detailed and intrusive. Appendix A to General Order 165 setting forth the definitions and requirements is attached hereto for reference.

Ohio has also established rules and regulations regarding the inspection, maintenance, repair and replacement of transmission and distribution facilities. 2003 OH Reg. 4901:1-10-27. The Ohio rules first require assessment of distribution and transmission system circuit reliability performance as well as reporting on the circuit performance and reporting of remedial actions taken or planned to improve circuit performance. The rules then set forth inspection cycles for distribution circuits and equipment, transmission circuits and equipment, and transmission and distribution substations and equipment. Each EDC is required to establish and maintain written programs and procedures for the inspection, maintenance, repair and replacement of facilities. The programs are to have preventative requirements and must include

certain designated facilities. The Commission must review and accept the details and contents of the EDC's plan. The relevant Ohio regulations are attached hereto for reference.

On January 5, 2005, the New York Public Service Commission issued an Order, which established a "rigorous program of annual testing, inspection of electric facilities." NY PSC Press Release of December 15, 2004 (attached hereto).[1] The New York PSC initiated its investigation in the aftermath of the tragic death of a New York City resident in January 2004 from stray voltage. Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems, Docket No. 04-M-0159, 2005 N.Y. PUC LEXIS 2 (Jan. 5, 2005)(NY Order). The investigation was then broadened to consider the need for, and appropriateness of, state-wide measures to address safety issues such as stray voltage. The New York PSC adopted a state-wide set of safety standards. As described in the Order, the standards include:

> (1) annual stray voltage testing of utility 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, and reporting requirements; and (4) adoption of the National Electric Safety Code (NESC) as the minimum standard governing utility construction, maintenance, and operations.

NY Order at *2. The standards adopted by the NY PSC are attached hereto for reference.

The OCA would also note that in its Order, the NY PSC identified a set of principles to guide safety standards that were proposed by a number of the New York electric utilities. The New York PSC described the principles as follows:

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1 http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/Web/E3EC16A5BFE93DC985256F6B00680DE5/$File/pr04094.pdf?OpenElement

> These principles provide that any testing and inspection standards should: (1) contribute to safety; (2) consider differences in utility systems, type of facilities used (i.e., overhead and underground), and population densities (urban, suburban, and rural); (3) focus on electric facilities identified as presenting the greatest potential exposure to the public, based on type, location and public access, and recognize that the majority of electric utility infrastructure is designed to incorporate devices and schemes for public and system protection; (4) provide consistency with the NESC requirements for testing, inspection, and maintenance of electric equipment at such intervals as experience has shown to be necessary; (5) consider cost effectiveness to ensure costs of safety program are commensurate with added safety or reliability; and (6) provide that utility responsibility for testing and inspection extends only to its facilities and not to facilities owned by others.

NY Order at *7-8. While the issue in New York was more directly focused on a safety issue, the OCA submits that, in general, these principles can be applied to the area of reliability that this Commission's regulations are addressing and can help guide the Commission's development of its regulations.

Finally, the OCA submits that the Commission must make clear that any regulations that it establishes through this rulemaking do not override an EDC's obligation to provide safe, adequate, reliable and reasonably continuous service under the Public Utility Code. 66 Pa.C.S. §1501. Additionally, it does not create any presumption that compliance with these minimum standards constitutes the provision of safe, adequate and reliable service as required by the Public Utility Code. EDCs will need to exercise their professional judgment based on their distribution systems and service territories. Factors such as weather, geography and changing technology must all be considered by the EDC in providing high quality service. In adopting its standards, the California Commission noted this point:

> [T]he standards we adopt today are maximum acceptable lengths for inspection cycles. In certain circumstances, it may be prudent to conduct more frequent inspections to assure high-quality service and safe operations. In those cases, the utilities are responsible to inspect facilities more frequently.

Re: Electric Distribution Facility Standard Setting, 1997 Cal. PUC LEXIS 1243, *7-8; 71 CPUC2d 471 (March 31, 1997). The California General Order 165 then captures this principle as follows:

> The requirements of this order are in addition to the requirements imposed upon utilities under General Orders 95 and 128 to maintain a safe and reliable electric system. Nothing in this General Order relieves any utility from any requirements or obligations that it has under General Orders 95 and 128.
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> * * *
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> Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to assure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in the attached table.

General Order 165, Appendix A, Section II (Applicability) and Section IV (Standards for Inspection, Record-keeping, and Reporting)(attached hereto).

The OCA urges the Commission to adopt a broad set of inspection and maintenance standards designed to promote high-quality service and a distribution system that is safe and reliable for the public. Broad standards will allow for flexibility in techniques and processes used, and it will allow for further innovation. By establishing broad standards that set forth minimum requirements, industry practices should continue to develop.

The OCA will provide its Comments on the questions posed by the Commission in more detail below. The OCA will also recommend some minimum standards in response to

Questions C and D, and consider the use of an automatic mechanism to compensate ratepayers in response to Question E.[2]

II. COMMENTS

A. Whether it is appropriate for the Commission to adopt specific inspection and maintenance standards.

The OCA submits that pursuant to Section 2802(20) of the Public Utility Code, the Commission is required to establish regulations regarding inspection and maintenance standards. In relevant part, Section 2802(20) provides:

> (20) Since continuing and ensuring the reliability of electric service depends on adequate generation and on conscientious inspection and maintenance of transmission and distribution systems, . . . the Commission shall set thorough regulations, inspection, maintenance, repair and replacement standards and enforce those standards.

66 Pa.C.S. §2802(20). Given the importance of the reliability of the transmission and distribution system, the OCA urges the Commission to establish and enforce appropriate standards.

The OCA submits that the paramount objective of the Commission's standards should be to ensure that EDCs can meet their statutory obligation to provide safe, adequate, reliable and reasonably continuous service to all customers. 66 Pa.C.S. §1501. The

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[2] The OCA would like to acknowledge the assistance of Barbara R. Alexander and Peter Lanzalotta in the preparation of these Comments. Ms. Alexander is a Consumer Affairs Consultant who provides expert assistance on consumer protection and customer service issues associated with utility regulation. Ms. Alexander served for nearly ten years as the Director of the Consumer Assistance Division of the Maine Public Utilities Commission before opening her consulting practice. Ms. Alexander has testified extensively, both in Pennsylvania and other states, on consumer protection and customer service issues. Ms. Alexander holds a Bachelors Degree from the University of Michigan and a Juris Doctor degree from the University of Maine School of Law.

Mr. Lanzalotta has been involved with the planning and operation of electric utility systems and with utility regulatory matters for over thirty years. Mr. Lanzalotta holds a Bachelor of Science degree in Electric Power Engineering and a Masters degree in Business Administration. Mr. Lanzalotta has led numerous projects focused on electric reliability and service quality in the past ten years, including work on behalf of the City of Chicago on electric reliability-related matters and work in Delaware, Maryland, and New Jersey to help develop procedures for reporting on and evaluating electric distribution system reliability performance, and recommending remedial actions. Recently, Mr. Lanzalotta assisted the OCA in the Investigation Into the Reliability of the FirstEnergy system in Pennsylvania, and he has assisted the OCA in investigating specific electric reliability complaints.

Commission's standards will need to work in concert with any standards established by FERC, by the Regional Transmission Operators, and by the appropriate reliability council or forum. Additionally, the inspection and maintenance standards should be designed to complement and enhance the Commission's reliability benchmarks and standards.

The OCA submits that the Commission may need to take a two-tiered approach to inspection and maintenance standards. First, the Commission should establish specific minimum inspection and maintenance standards that apply to all EDCs. Since each EDC remains obligated, however, to implement inspection and maintenance standards that will enable it to achieve the level of reliability that is required to provide safe, adequate, reliable and reasonably continuous service, a review of individual inspection and maintenance plans based on the unique characteristics of each EDC may be necessary. The OCA will discuss this two-tiered approach in response to Question B.

In establishing any standards, however, the Commission must make two points clear. First, the Commission must be clear that the standards contained in the regulations are *minimum* standards and that EDCs must, and should, do more if required to maintain safe, adequate, reliable, and reasonably continuous service as required by the Public Utility Code. There will be inherent differences between the service territories and the condition of equipment of the EDCs. Differences such as weather, geography, and vintage of equipment may call for more stringent inspection and maintenance to maintain safe and adequate service.

Second, the Commission must make clear that compliance with these minimum standards does not serve as a "safe haven" for the EDC. In other words, an EDC that has failed to maintain adequate reliability cannot use as a defense that it met the Commission minimum standards. As noted earlier, the California General Order 165 addresses the issue as follows:

> The requirements of this order are in addition to the requirements imposed upon utilities under General Orders 95 and 128 to maintain a safe and reliable electric system. Nothing in this General Order relieves any utility from any requirements or obligations that it has under General Orders 95 and 128.
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> Each utility subject to this General Order shall conduct inspections of distribution facilities, as necessary, to assure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in the attached table.

General Order 165, Appendix A, Section II (Applicability) and Section IV (Standards for Inspection, Record-keeping, and Reporting). Similar language, or language conveying this principle, should be included in the Commission's regulations.

The Commission is obligated under the Public Utility Code to establish regulations that set forth inspection, maintenance, repair and replacement standards and to enforce those standards. The Commission should meet this obligation by establishing minimum standards, as well as an appropriate review and enforcement mechanism. The OCA will suggest some minimum standards and enforcement approaches in response to Questions C, D, and E.

B. Whether standards should be placed in the regulations which are specific to each individual EDC, or whether all EDCs should be held to the same standard, and how would this be monitored and regulated.

The OCA suggests that the Commission make use of both regulatory approaches--minimum standards and individual plan filings-- to ensure that adequate inspection and maintenance standards, practices and programs are in place for transmission and distribution facilities. The Commission should first establish through its regulations minimum standards that would apply to all EDCs. The Commission should also identify any practices or procedures that it determines should be in use by all EDCs. The California General Order 165, the NY PSC Safety Standards, and the Ohio regulations that are attached hereto provide some examples of

these general standards. The OCA submits, however, that the Commission should also require the filing of specific inspection, maintenance, repair and replacement program plans by each EDC for review and approval by the Commission or staff. The purpose of requiring EDC-specific plans is to assure compliance with the minimum standards and to reflect EDC-specific programs that may need to be more stringent, or contain additional components, to address unique circumstances within the individual service territory. Furthermore, the EDC-specific inspection, maintenance, repair, and replacement program plans should demonstrate that the EDC has adopted a proactive program that will prevent deterioration in reliability. The EDC-specific programs may also need to change from year to year to address varying reliability performance levels and varying operating conditions, such as weather conditions, to assure that reliability is maintained.[3]

The OCA has previously recommended the filing of T&D Maintenance Plans. See, *e.g.*, Advanced Notice of Proposed Rulemaking Regarding Electric Reliability Standards, Docket No. L-00970120 (OCA Comments of March 17, 1997). The OCA continues to recommend that the T&D Maintenance Plan be a comprehensive document that specifies any and all standards required for maintaining a safe and reliable system. The Maintenance Plan could, for example, identify:

- Any and all applicable hardware standards and how they will be complied with;
- Any and all applicable operation standards and how they will be complied with;
- Routine maintenance requirements, including procedures such as inspections, equipment replacement, and operational tests;
- Emergency maintenance plans;
- Procedures for coordinating with other interconnected systems.

[3] For example, as pointed out in the CNUC Report to FERC, drought and increased rainfall can have a significant impact on tree growth which impacts the appropriate tree trimming cycles. CNUC Report at 13, 23-25.

A complete T&D Maintenance Plan could be filed with the Commission and then updated every two years.

The Commission should also require that the EDC periodically report to the Commission its compliance with the minimum inspection and maintenance standards as well as its specific programs. The Commission could add this reporting requirement to the Annual Report filed under 52 Pa. Code §57.195(a). The OCA does not anticipate the need for quarterly reporting in this regard given the information that the Commission now receives through the quarterly reporting process. The OCA would note, however, that if the Commission is concerned at the time of the quarterly reporting that an EDC is not meeting the reliability benchmark and standard requirements, it might wish to review compliance with the minimum inspection and maintenance standards at that time.

The Commission should also require as part of any distribution base rate proceeding that the EDC certify that its inspection and maintenance standards, for which it seeks cost recovery, meet or exceed the Commission's minimum standards. The base rate review process can be a valuable tool in ensuring that inspection, maintenance, repair and replacement are being achieved in the most cost-effective manner.

The OCA submits that the use of minimum standards, combined with a review of EDC-specific programs, would be the most useful approach in ensuring reliability and safety. This approach will allow for individual service territory characteristics to be included in the programs and plans while ensuring that all EDCs clearly understand the minimum requirements and standards. Additionally, appropriate reporting and monitoring will be necessary to enforcing compliance with these standards.

C. What the standards should be regarding vegetation management practices, pole inspections, transmission and distribution line inspections, substations, transformers, reclosers, and other types of inspection and maintenance practices.

The OCA recommends that the Commission consider minimum standards for inspection and maintenance practices for a number of areas important to electric service reliability. Specifically, the Commission's question identifies the key areas. The OCA will first address the issue of inspection standards, and then will address vegetation management practices. Other maintenance, repair and replacement standards will be addressed in response to Question D.

1. Inspections

Routine inspections, when properly conducted, serve at least two purposes. The first purpose is to help ensure the safety of electric and transmission facilities to those who come into contact with, or are in close proximity to, those facilities. The second purpose is to identify the need for maintenance of facilities so as to avoid or reduce electric service interruptions caused by failures of the facilities. There are a number of types of inspections that should be conducted at varying intervals. The three primary types of inspections are often referred to as patrol, detailed and intrusive inspections.

The patrol inspection is the simple, visual inspection where a worker looks with unaided vision, or with the help of binoculars, at the electric facilities and their surroundings. A patrol inspection can be conducted by walking, driving or flying by the facilities. This type of inspection can help to identify obvious structural problems and hazards, such as leaning poles, damaged equipment, vandalism, and the growth of vegetation. Regular patrolling is a crucial part of protecting public safety and reliability. The second type of inspection, detailed inspection, is when individual pieces of equipment or facilities are examined both visually and

through the use of routine diagnostic tests. In a detailed inspection, equipment is opened if that is useful, routine diagnostic tests are performed, and the condition is recorded. The use of infrared (thermographic) scans of substations, equipment, and lines is an example of a test in a detailed inspection. Testing for stray voltage is another example of a test performed during a detailed inspection.

The third type of inspection is an intrusive inspection. In an intrusive inspection, more sophisticated diagnostic tools are utilized and all types of facilities are inspected. Intrusive inspections, for example, may require that underground portions of facilities be unearthed and samples taken for analysis.

The OCA recommends that minimum inspection standards be established for key facilities and equipment. The OCA suggests that the Commission standards identify the type of inspection that should be performed, and the time frame, or cycle, for performing the inspections of the key facilities and equipment. The standards must make clear that these are the maximum time frames between inspections, and that more frequent inspections, or other types of inspections should be included as part of an EDC's practices. For example, while a standard may call for a detailed inspection of a transmission line on an annual basis, utility practice may also include more frequent patrols to identify any developing problems.

The OCA recommends the following inspection cycle standards for certain key facilities and equipment:

- **Transmission and distribution substations**: Annual detailed inspections that include inspection by infrared scanning.
- **Substation transformers supplying transmission lines**: Annual intrusive inspection.

- **Substation transformers supplying distribution lines**: Intrusive inspection every two years that includes bushing testing, dissolved gas analysis and other testing.

- **Transmission Lines and all attached equipment**: Annual detailed inspection that includes visual inspection and infrared scanning.

- **Distribution Lines and all attached equipment (transformers, switching/protective devices, reclosers, regulators/capacitors)**: Patrol inspection once every two years and a detailed inspection once every five years.

- **Wood poles**: Detailed inspection once every ten years with an intrusive inspection of those poles identified as having potential problems through the detailed inspection.

The OCA anticipates that most Pennsylvania EDCs follow inspection protocols that are similar to, or more frequent than those listed. As the OCA has noted, however, these should be minimum inspection standards to assist in identifying problems before they disrupt service. As noted earlier, the OCA will discuss in response to Question D some maintenance practice standards for taking corrective action when problems are detected through the inspections.

2. Vegetation Management

Vegetation management, or tree trimming as it is frequently called, refers to maintaining adequate clearance between trees and other vegetation and overhead electric facilities. Current vegetation management practices typically involve comprehensive trimming on a specified cycle, and "spot" or "hot spot" trimming of specific problem areas before the next regularly scheduled comprehensive trimming cycle. The most prevalent cycle for vegetation management is four years, although there may be some differences between urban and rural facilities.

Trees are a major cause of electric service interruptions for most Pennsylvania electric systems. Trees from both within the right-of-way, and outside of the right-of-way, can

threaten both distribution and transmission lines. Adequate vegetation management practices will have programs in place to address trees within the right-of-way as well as "danger trees" that are typically outside of the right-of-way. The effectiveness of a vegetation management program can be complicated by a number of factors. A critical factor is the weather. During drier conditions, for example, trees grow more slowly. A wet period following a drought, however, may result in explosive tree growth. Additionally, different varieties of trees may grow at different rates. All of these factors need to be considered in the design of appropriate minimum standards for vegetation management practices.

The OCA recommends that the Commission establish minimum standards for vegetation management programs. As a minimum standard, the OCA recommends that a vegetation management program perform comprehensive trimming of both transmission and distribution lines at least once every four years. A mid-cycle inspection should also be performed to assess growth since the last comprehensive trim, to aid in identifying the need for hot spot trimming, and to determine if comprehensive trimming cycles need to be adjusted. The OCA would note that the patrol inspections of the transmission and distribution facilities recommended above should also evaluate the need for vegetation management.

D. Whether standards should be established for repair and maintenance of electric distribution company equipment or facilities that are critical for system reliability.

The OCA recommends that the Commission establish some minimum standards related to the repair, replacement and maintenance of equipment and facilities that are critical for system reliability. As noted above, the OCA recommended some minimum standards for inspection cycles for these facilities. Detailed below, the OCA suggests minimum standards for the repair or replacement of equipment and facilities found to be in need of corrective action upon inspection. The OCA will also discuss the need for age of facilities to be considered as a

factor in any program evaluating the need to replace facilities and the need for data collection to determine the best approach to considering the age of facilities.

1. Standards for Corrective Action

The OCA has recommended minimum inspection cycles for various facilities and equipment. When any inspection detects a problem with equipment or facilities, the EDC will need to develop and implement corrective action plans. Given the thousands of facilities and problems that can develop, the Commission standards will not be able to adequately address all maintenance practices in this regard. The comprehensive T&D Maintenance Plan that the OCA recommends each EDC submit to the Commission will more properly address these issues.

The OCA does recommend, however, that the Commission establish minimum repair or maintenance standards for certain critical facilities. The minimum standards cannot replace the EDC's need to thoroughly evaluate each identified deficiency and respond in an appropriate time frame with appropriate corrective actions. A deficiency indicating the likelihood of a near term failure of the equipment, for example, may require a more rapid response than that contained in the minimum standards. The minimum standards, however, will provide some guidance when corrective action for key facilities is needed.

The OCA suggests the following for certain key facilities:

- **Transmission and distribution substations**: A component discovered through infrared scan to be more than 100 degrees centigrade above ambient temperature should be addressed within 30 days.
- **Substation transformers supplying transmission lines**: Deficiencies identified should be repaired or addressed within 30 days.
- **Substation transformers supplying distribution lines**: Deficiencies identified should be repaired or addressed within 60 days.

- **Transmission lines and all attached equipment**: A component discovered through infrared scan to be more than 100 degrees centigrade above ambient temperature should be addressed within 30 days.

- **Distribution lines and all attached equipment**: A component discovered through infrared scan to be more than 100 degrees centigrade above ambient temperature should be addressed within 30 days.

- **Wood Poles**: Poles with major deficiencies that considerably effect the strength of the pole should be replaced within 60 days.

The Commission may wish to establish time frames for implementing any corrective actions for other key facilities as well. The OCA would note that these minimum time frames should apply to the detection of any problem on the critical facility, whether through the routine inspection, other inspections conducted by the EDC, or otherwise.

2. Age of Facilities As A Factor in Replacement

The average age of major transmission and distribution system components in Pennsylvania is generally increasing, as it is in most jurisdictions. While these components are generally designed for a long life, it is important for the EDC to give extra attention to those facilities that are approaching, or exceeding, their normally expected service lives. As facilities approach or exceed their normal operating life, the probability that they will fail increases. These failures can result in electric service interruptions. EDCs across the Nation are moving toward policies that, increasingly, leave primary distribution system equipment in place until it fails or negatively impacts system reliability in an attempt to contain both maintenance costs and capital costs. The OCA recognizes, however, that replacing equipment on a forced retirement schedule can have significant cost consequences that could be unnecessary or unwarranted.

The OCA submits that more study of this issue may be necessary. To facilitate the determination of the best approach to replacing aging equipment, the OCA recommends that the Commission require the EDCs to report on replacement policies, changes to replacement

policies, group age data, group failure data, and to the extent possible, individual component age failure data. This data should be provided for the major equipment groupings such as substation transformers, transmission towers, distribution poles, transmission conductors, overhead and underground distribution primary conductors, distribution line transformers, distribution line reclosers, substation breakers, and capacitors.

Data should also be provided for individual substation transformers. These transformers can have significant impacts on system reliability if they fail. They are also fairly discrete in number so that individual reporting is feasible. Data, including age, peak loading data and failure data for each individual substation transformer should be gathered, maintained and reported.

The OCA submits that the collection and reporting of this data over time should assist in developing an appropriate approach to aging facilities, and determining whether more proactive replacement policies are needed.

E. Whether there should be automatic civil penalties written into the regulations for failure to meet standards for more than three consecutive quarters or some other reasonable time period, depending upon the type of inspection and maintenance standards that is at question.

The OCA welcomes the Commission's interest in this approach. In prior Comments on reliability issues and customer service issues, the OCA has suggested that the Commission may wish to consider pre-established consequences for the failure of an EDC to meet reliability requirements. See, *e.g.*, Notice of Proposed Rulemaking Re: Electric Service Reliability Standards, Docket No. L-00970120 (OCA Comments of December 10, 1997). Most recently, the OCA recommended that if an EDC does not meet the reliability performance benchmarks and standards, that the EDC be required to file an improvement plan and that the improvement plan have predetermined penalties for failure to achieve the milestones and targets

contained in the approved plan. See, Rulemaking Re: Amended Reliability Benchmarks and Standards for the Electric Distribution Companies, Docket No. L-00030161 (OCA Comments of December 8, 2003).

Several states have implemented a system of financial penalties for failure to achieve reliability performance or inspection and maintenance performance. The New York PSC, in its recent safety standards attached hereto, implemented a performance mechanism for failure to achieve the stated inspection targets. NY Safety Standards, Section 10. Failure to achieve the stated target for stray voltage testing results in a 75 basis point rate adjustment to the return on equity. See attached Press Release of December 15, 2004, ¶5. Additionally, failure to achieve the other inspection targets also results in a 75 basis point rate adjustment to the return on equity. Thus, an EDC that fails to meet any of its obligations under the safety standards could see a 150 basis point rate adjustment to its return on equity. The Commission, in establishing this mechanism, indicated its intent to send "a clear message to the utilities, their customers, and the public of the importance we place on safety." NY Order at *79.[4]

Some states have used individual customer rebates or bill credits when an EDC has failed to meet annual reliability performance standards, circuit improvement plans, or failure to meet an approved plan for maintenance and repair. For example, under the service quality and reliability standards, an electric utility that fails to restore service in a timely manner or that fails to avoid repetitive interruptions on the same circuit, must provide individual bill credits in the

[4] The New York Order and Investigation arose from the death of a New York City resident due to stray voltage.

amount of $25 or the applicable monthly customer service charge, whichever is greater. Michigan Rule 460.744 through 460.747.[5]

The OCA recommends that the Commission consider the use of a financial mechanism to better ensure that reliability is maintained and that the EDC's statutory obligations are met. The OCA recommends that the Commission's already adopted Reliability Performance benchmarks and standards be used in concert with the Inspection and Maintenance standards when considering financial consequences. The OCA recommends that the Commission construct an approach that would result in an automatic compensation to ratepayers in the form of rate reductions or bill credits if the EDC fails to meet its relevant reliability performance standards and fails to meet the minimum inspection and maintenance standards. This financial compensation should be significant since it represents the failure of the utility to comply with two separate sets of regulations designed to provide ratepayers safe, adequate, reliable and reasonably continuous service as required by the Public Utility Code.

A system of predetermined rate reductions or bill credits, and possibly civil penalties, should also be part of any compliance plan that is developed to remedy failure to meet the inspection and maintenance standards.[6] If an EDC has failed to comply with the minimum inspection and maintenance standards, the Commission should first require the EDC to submit a plan demonstrating how it intends to come into compliance with the standards. The compliance plan should have detailed milestones as well as periodic reporting to ensure compliance with the

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[5] The OCA notes that the Michigan rules also allow an electric utility to file a specific request for incentive payments if all of the customer service and reliability standards are met or exceeded in any one year. Since Pennsylvania does not utilize a mandatory customer credit or penalty approach for failure to meet the reliability performance benchmarks and standards, such an incentive mechanism would not be relevant at this time.

[6] The OCA also continues to encourage the Commission to consider automatic rate reductions, bill credits or civil penalties when it is developing compliance plans resulting from an EDC's failure to meet its reliability performance standards. Such compliance plans should include automatic penalties for failure to meet the milestones and obligations contained in the plans.

plan. Any failure to meet interim milestones or performance obligations should result in a predetermined level of rate reduction or bill credit. Development of the specific compliance payments is best left to plan development since different compliance measures may have different impacts upon the quality of service.

The OCA submits that automatic financial mechanisms such as rate reductions, bill credits, or civil penalties, can effectively convey the importance of proper inspection and maintenance of the transmission and distribution system to the EDCs as well as to customers and the public. In implementing its performance mechanism, the New York PSC captured the important considerations as follows:

> The purpose of a performance mechanism associated with the safety standards is to ensure that the utilities continue to place the appropriate focus and emphasis on safely maintaining their electric systems and invest the capital and maintenance dollars necessary to do so. We recognize the competing demands of providing safe and adequate service to customers and providing value and benefits to shareholders, and we do not want to see safety sacrificed, or investments and expenditures deferred, in order to improve earnings or increase other shareholder benefits. Because the ability of a utility to comply with the safety standards rests with its management and the focus its management places on this effort, and because the utility will be able to wholly avoid the possibility of rate adjustments by its decisions and actions, the mechanism is neither unreasonable nor punitive.

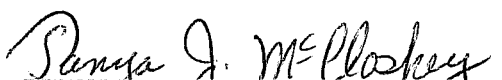
NY Order at *75-76.

Reliability is of critical importance to the Commonwealth for health, safety, and economic reasons. The use of properly structured penalties or payments can assist the Commission in maintaining the needed levels of reliability. The OCA recommends that the Commission regulations allow for such penalties and payments.

III. CONCLUSION

The OCA appreciates this opportunity to present Comments on this important topic. Adequate inspection and maintenance standards are essential to ensuring that customers receive safe, adequate, reliable and reasonably continuous service. The OCA looks forward to continuing to work with the Commission and all interested parties in the development of reasonable and appropriate inspection and maintenance standards and regulations.

Respectfully Submitted,



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Dated: February 9, 2005
82674.doc

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advanced Notice of Proposed Rulemaking for revision of 52 Pa. Code Chapter 57pertaining to adding Inspection and Maintenance Standards for the Electric Distribution Companies	: : : :	Docket No.	L-00040167

APPENDIX

CALIFORNIA GENERAL ORDER 165

General Order
Number 165

Prescribed by the
Public Utilities Commission
of the
State Of California

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, Ca 94102

Appendix A
Public Utilities Commission of the State of California
Inspection Cycles for Electric Distribution Facilities

Adopted March 31, 1997 Effective March 1, 1997
(D.97-03-070 in I.95-02-015 and R.96-11-004)

I. Purpose

The purpose of this General Order is to establish minimum requirements for electric distribution facilities, regarding inspection (including maximum allowable inspection cycle lengths), condition rating, scheduling and performance of corrective action, record-keeping, and reporting, in order to ensure safe and high-quality electrical service, and to implement the provisions of Section 364 of Assembly Bill 1890, Chapter 854, Statutes of 1996.

II. Applicability

As of March 31, 1997, this General Order applies to Pacific Gas and Electric Company, PacifiCorp, San Diego Gas and Electric Company, Sierra Pacific Power Company, and Southern California Edison Company.

The requirements of this order are in addition to the requirements imposed upon utilities under General Orders 95 and 128 to maintain a safe and reliable electric system. Nothing in this General Order relieves any utility from any requirements or obligations that it has under General Orders 95 and 128.

III. Definitions

For the purpose of this General Order,

A "Urban" shall be defined as those areas with a population of more than 1,000 persons per square mile as determined by the United States Bureau of the Census.

B "Rural" shall be defined as those areas with a population of less than 1,000 persons per square mile as determined by the United States Bureau of the Census.

C "Patrol" shall be defined as a simple visual inspection, of applicable utility equipment and structures, that is designed to identify obvious structural problems and hazards. Patrols may be carried out in the course of other company business.

D "Detailed" inspection shall be defined as one where individual pieces of equipment and structures are carefully examined, visually and through use of routine diagnostic test, as appropriate, and (if practical and if useful information can be so gathered) opened, and the condition of each rated and recorded.

E "Intrusive" inspection is defined as one involving movement of soil, taking samples for analysis, and/or using more sophisticated diagnostic tools beyond visual inspections or instrument reading.

F "Corrective Action" shall be defined as maintenance, repair, or replacement of utility equipment and structures so that they function properly and safely.

IV. Standards for Inspection, Record-keeping, and Reporting

Each utility subject to this General Order shall conduct inspections of its distribution facilities, as necessary, to assure reliable, high-quality, and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified in the attached table.

Each utility subject to this General Order shall submit to the Commission by no later than July 1, 1997, compliance plans for the inspections and record-keeping required by this order. These compliance plans will include the proposed forms and formats for annual reports and source records, as well as the utility's plans for the types of inspections and equipment to be inspected during the coming year. For detailed and intrusive inspections, schedules should be detailed enough (in terms of the months of inspection and the circuit, area, or equipment to be inspected) to allow staff to confirm that schedule inspections are proceeding as planned. For patrol inspections, companies should explain how all required facilities will be covered during the year. Energy Division or any successor staff divisions may prescribe changes relating to data, definitions, reporting and record-keeping formats and forms when and as necessary.

Each utility subject to this General Order shall submit an annual report detailing its compliance with this General Order under penalty of perjury. The first report required under this section shall be filed with the Commission by no later than July 1, 1998. Each utility shall file subsequent annual reports for every following year by no later than July 1. The report shall identify the number of facilities, by type which have been inspected during the previous period. It shall identify those facilities which were scheduled for inspection but which were not inspected according to schedule and shall explain why the inspections were not conducted, and a date certain by which the required inspection will occur. The report shall also present the total and percentage breakdown of equipment rated at each condition rating level, including that equipment determined to be in need of corrective action. Where corrective action was scheduled during the reporting period, the report will present the total and percentage of equipment which was and was not corrected during the reporting period. For the latter, an explanation will be provided, including a date certain by which required corrective action will occur. The report will also present totals and the percentage of equipment in need of corrective action, but with a scheduled date beyond the reporting period, classified by the amount of time remaining before the scheduled action. All of the above information shall be presented for each type of facility identified in the attached table and shall be aggregated by district.

The company shall maintain records of inspection activities which shall be made available to parties or pursuant to Commission rules upon 30 days notice. Commission staff shall be permitted to inspect such records consistent with Public Utilities Code Section 314 (a).

For all inspections, within a reasonable period, company records shall specify the circuit, area, or equipment inspected, the name of the inspector, the date of the inspection, and any problems identified during each inspection, as well as the scheduled date of corrective action. For detailed and intrusive inspections, companies shall also rate the condition of inspected equipment. Upon completion of corrective action, company records will show the nature of the work, the date, and the identity of persons performing the work.

Dated March 31, 1997, at San Francisco, California.

/s/ Wesley M. Franklin

Wesley M. Franklin
Executive Director

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Electric Company System Inspection Cycles (Maximum Intervals in Years)

	Patrol		Detailed		Intrusive	
	Urban	Rural	Urban	Rural	Urban	Rural
Transformers						
Overhead	1	2	5	5	—	—
Underground	1	2	3	3	—	—
Padmounted	1	2	5	5	—	—
Switching/Protective Devices						
Overhead	1	2	5	5	—	—
Underground	1	2	3	3	—	—
Padmounted	1	2	5	5	—	—
Regulators/Capacitors						
Overhead	1	2	5	5	—	—
Underground	1	2	3	3	—	—
Padmounted	1	2	5	5	—	—
Overhead Conductors and Cables	1	2	5	5	—	—
Streetlighting	1	2	x	x	—	—
Wood Poles under 15 years	1	2	x	x	x	x
Wood Poles over 15 years which have not been subject to intrusive inspection	1	2	x	x	10	10
Wood Poles which passed intrusive inspection	—	—	—	—	20	20

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advanced Notice of Proposed Rulemaking for revision of 52 Pa. Code Chapter 57pertaining to adding Inspection and Maintenance Standards for the Electric Distribution Companies	: : : :	Docket No.	L-00040167

APPENDIX

2003 OH Reg 4901:1-10-27

Rule Amplifies: 4905.04, 4905.22, 4905.28, 4928.06
Prior Effective Dates: 9/1/77, 9/18/2000

4901:1-10-27 Inspection, maintenance, repair, and replacement of transmission and distribution facilities (circuits and equipment).

(A) This rule applies to the inspection, maintenance, repair, and replacement of utility transmission and distribution system facilities (circuits and equipment). The rebuttable presumption that an electric utility is providing adequate service pursuant to paragraph (F) of rule 4901:1-10-02 of the Administrative Code, does not apply to this rule.

(B) Distribution system performance assessment. For electric distribution circuits, the electric utility shall comply with rule 4901:1-10-11 of the Administrative Code.

(C) Transmission system performance assessment. Each electric utility operating during the year 2000 shall file a report no later than January 1, 2001 and any new electric utility commencing operation after January 1, 2001 shall file within ninety days of commencing operations, a report setting forth its methodology used to assess the reliability of its transmission circuits for review and acceptance by the commission:

(1) Each electric utility shall submit, for review and acceptance by the director of the consumer services department or the director's designee, a method to assess circuit reliability based on the total number of sustained outages per circuit per calendar year and other factors proposed by the electric utility company, and supporting justification for that method.

(a) If the electric utility and the director of the consumer services department or the director's designee cannot agree on a method to assess transmission circuit reliability, the electric utility shall apply, within ninety days after the submission of its proposal, to the commission for a hearing and file a written report along with documentation supporting its methodology.

(b) Revisions to a previously accepted methodology for assessing the reliability of its transmission circuits, shall be submitted for review and acceptance along with supporting justification to the director of the consumer services department or the director's designee, no later than ninety days prior to the beginning of the next succeeding calendar year.

(2) Each electric utility providing transmission service shall submit a report, no later than sixty days after the end of each calendar year ending December thirty-first, to the director of the consumer services department or the director's designee, that identifies the performance of each transmission circuit for the previous calendar year. Each annual report shall, at a minimum, provide the following information for each transmission circuit:

(a) Circuit identification number;

(b) The location of each circuit;

(c) The number of outages and their causes by circuit;

(d) The substation(s) and/or distribution circuit(s) affected by each of the outages reported for paragraph (C)(2)(c) of rule 4901:1-10-27 of the Administrative Code, by circuit;

(e) A description of and the rationale for any remedial action taken or planned to improve circuit performance or for taking no remedial action; and

(f) Start and completion dates of any remedial action taken or planned.

(3) The annual report shall be submitted in a form prescribed by the commission.

(D) Transmission and distribution facilities inspections.

Unless otherwise determined by the commission, each electric utility shall, at a minimum, inspect its electric transmission and distribution facilities (circuits and equipment) to maintain safe and reliable service on the following scheduled basis:

(1) Distribution - at least one-fifth of all distribution circuits and equipment shall be inspected annually. All distribution circuits and equipment shall be inspected at least once every five years.

(2) Transmission - all transmission circuits and equipment shall be inspected at least once every year.

(3) Substations - all transmission and distribution substations and equipment shall be inspected at least once each month.

(4) Each electric utility shall file a report on its compliance with the inspection schedule in paragraphs (D)(1) to (D)(3) of this rule no later than ninety days after the end of each calendar year ending December thirty-first.

(E) Transmission and distribution inspection, maintenance, repair, and replacement programs.

(1) Each electric utility shall establish and maintain written programs, procedures and schedules for the inspection, maintenance, repair, and replacement of its transmission and distribution circuits and equipment. These programs shall establish preventative requirements for the electric utility to maintain safe and reliable service. Programs shall include, but are not limited to, the following facilities:

(a) Poles and towers;

(b) Conductors;

(c) Pad-mounted transformers;

(d) Line reclosers;

(e) Line capacitors;

(f) Right-of-way vegetation control; and

(g) Substations.

(2) Inspection, maintenance, repair, and replacement program review.

(a) Each electric utility operating during the year 2000 shall submit a plan for the inspection, maintenance, repair, and replacement of circuits and equipment as stated in paragraph (E)(1) of this rule for review and acceptance by the director of the consumer services department or the director's designee no later than January 1, 2001. The electric utility's submittal shall include supporting justification and rationale based upon historical practices and procedures used by the electric utility over the past five years. Any new electric utility commencing operation after January 1, 2001, shall file within ninety days of commencing operations a plan for its inspection, maintenance, repair and replacement of circuits and equipment, including supporting justification and rationale for the plan.

(b) If the electric utility and the director of the consumer services department or the director's designee cannot agree on the details and contents of the utility's plan, the electric utility shall file, within one hundred twenty days after the submission of its plan, with the commission for a hearing, file a written report and documentation supporting its plan.

(c) Revisions to a previously accepted plan shall be submitted for review and acceptance as outlined in paragraph (E)(2)(a) of this rule, no later than ninety days prior to the beginning of the next succeeding calendar year.

(F) Records. Each electric utility shall maintain records sufficient to demonstrate compliance with its transmission and distribution facilities inspection, maintenance, repair, and replacement programs as required by this rule.

Effective: 01/01/2004
R.C. 119.032 review dates: 07/30/2003 and 11/30/2007
Promulgated Under: 111.15
Statutory Authority: 4928.06

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advanced Notice of Proposed Rulemaking for revision of 52 Pa. Code Chapter 57pertaining to adding Inspection and Maintenance Standards for the Electric Distribution Companies	: : : :	Docket No. L-00040167

APPENDIX

NEW YORK SAFETY STANDARDS

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 hand-held device capable of reliably detecting and audibly and/or visually signaling voltage in the range of 8 to 600 volts.

(f) 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.

ELECTRIC SAFETY STANDARDS

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 electric 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.

(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.

(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.

(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 8 to 600 volts.

(h) Any facility for which the testing device indicates the presence of voltage shall be guarded by the utility immediately and continuously until the utility has eliminated the stray voltage and made the area safe. The utility must take corrective action irrespective of whether the stray voltage is determined to be caused by its own or a customer-owned facility.

(i) 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 the monitor the condition of the temporary repair. All exceptions must be identified and justified as part of the reporting requirements under Section 9.

(j) In instances where stray voltage 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.

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 removed before commencing the inspection so that all of the facilities in the structure, and the structure itself, may be fully inspected.

(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.

SECTION 5: QUALITY ASSURANCE

Each utility shall develop a quality assurance program to ensure timely and proper compliance with these safety standards.

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) 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 has tested all of its publicly accessible electric facilities and all streetlights.

(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 is in compliance with its inspection program and has inspected the requisite number of electric facilities. Additionally, at the end of five-year inspection cycle, the officer shall certify that all of the utility's electric facilities have been inspected at least once.

(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 report, within 45 days of the date these safety standards take effect, that provides: (i) the details of its voltage testing program; (ii) the details of its inspection program; (iii) the safety criteria it will apply as part of each program; (iv) an inspection schedule that demonstrates how the utility will comply with the requirement to inspect all of its electric facilities at least once every five years; (v) the details of its quality assurance program; (vi) its plans to train its employees and contractors to perform the testing and inspections; and (vii) a description of any research and development activities the utility is conducting or plans to conduct related to stray voltage and safety issues.

(b) Each utility shall file a comprehensive report by January 15 each year that:

1. details the results of stray voltage tests and inspections conducted over the 12-month period ending November 30 of the prior calendar year;
2. addresses the performance mechanism specified in Section 10;
3. contains the certifications described in Section 7;
4. discusses the analyses undertaken on the causes of stray voltage within the utility's electric system, the conclusions drawn therefrom, the preventative and remedial measures identified, and the utility's plans to implement those measures; and
5. includes all other information that is pertinent to the issues addressed by the safety standards.

ELECTRIC 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.

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advanced Notice of Proposed Rulemaking	:		
for revision of 52 Pa. Code Chapter 57pertaining	:	Docket No.	L-00040167
to adding Inspection and Maintenance Standards	:		
for the Electric Distribution Companies	:		

APPENDIX

NEW YORK PSC PRESS RELEASE OF DECEMBER 15, 2004

STATE OF NEW YORK
Public Service Commission
William M. Flynn, Chairman

Three Empire State Plaza, Albany, NY 12223
Further Details: (518) 474-7080
http://www.dps.state.ny.us
FOR RELEASE: IMMEDIATELY 04094/04M0159

PSC Votes to Establish Rigorous Program of Annual Testing, Inspection of Electric Facilities

– Comprehensive Safety Standards Tie Utility Revenue Adjustments to Annual Targets –

New York, NY -- 12/15/04 -- The New York State Public Service Commission today voted to approve comprehensive electric safety standards designed to ensure the public safety of electric systems. The safety standards include requirements that the regulated electric utilities in New York State annually test all of their publicly accessible transmission and distribution facilities for stray voltage and inspect all of their electric facilities at least once every five years. To assure compliance with the safety standards, the Commission established strict recordkeeping, certification and reporting requirements and rate adjustments for failure to achieve specified performance targets for the testing and inspection programs.

"The safe and adequate delivery of electric service is a top priority of this Commission, and the very thorough electric safety standards we adopted today reflect our commitment to New Yorkers everywhere to ensure that utility services are provided as safely as possible," Commission Chairman William M. Flynn said. "The Commission has broad, statutory authority under the Public Service Law to establish specific safety standards applicable to all electric utilities subject to its jurisdiction. The requirements we are directing utilities to meet constitute a comprehensive and rigorous stray voltage-related testing and inspection program."

In response to the tragic death of Ms. Jodie Lane resulting from contact with a Consolidated Edison Company of New York, Inc. electric service box on January 16, 2004, the Commission directed Department of Public Service staff to examine Consolidated Edison's approach to safeguarding the public from exposure to stray voltage and to determine whether changes to that approach are necessary. In July 2004, the Commission expanded this matter to examine the stray voltage and other safety-related activities taken by all of the electric utilities subject to its jurisdiction. The safety standards established by today's vote are based on staff's investigation, on the results of stray voltage testing conducted by Consolidated Edison and other

New York utilities, and on the public comments received since July 2004. The safety standards contain a number of requirements governing regulated electric utilities, including the following.

1. All regulated electric transmission and distribution utilities, including municipal electric utilities under the Commission's jurisdiction, will perform annual stray voltage testing on electrical facilities to which the public is potentially exposed, regardless of whether they are served by underground or overhead systems. The testing will be performed on all manholes, service boxes, transformer vaults, pad mounted transformers, poles, and other facilities that conduct electricity and are readily accessible to the public. (In early 2004, the Commission required Consolidated Edison to test over 290,000 of its underground and overhead structures, which was completed in February 2004. In instances where stray voltage was detected, conditions were corrected with permanent repairs. The company's second round of testing on its underground structures and New York City-owned street lights and traffic signal poles will be completed by December 31, 2004.)

2. Each utility is required to test streetlights that it owns and municipal-owned streetlights and traffic signal poles to which it directly provides power. Such testing will be conducted when the streetlights are activated. (Consolidated Edison has already completed such testing on over 240,000 street lights in its service region. In instances where stray voltage was detected, conditions were made safe.)

3. All facilities testing positive for stray voltage will be guarded immediately and continuously until the utility has made the facility safe. Additionally, and after the facility is made safe, the utility will effect a permanent repair of the facility within 45 days, except in extraordinary circumstances.

4. Each utility will establish and implement formal inspection programs for their transmission and distribution facilities that comply with these safety standards. The inspection programs will be designed so that all of a utility's transmission and distribution facilities will be inspected at least once every five years. In other words, at least one-fifth of all utility equipment should be inspected every year. It is possible that some facilities will be subject to shorter inspection cycles.

5. All field visits and inspection results will be adequately documented in safety inspection records.

6. To ensure that the investor-owned electric utilities maintain the necessary focus on the safety of their electric systems, a generally applicable performance mechanism is established. This mechanism includes annual performance targets of 100% compliance for stray voltage testing and, after three years, 95% for annual facility inspections, with rate adjustments equivalent to 75 basis points of a company's earnings imposed for failure to achieve each of the annual targets (the inspection target is being phased-in over the next three years). A basis point is equivalent to one hundredth of a percentage point (0.01%). In the context of the Commission's safety program, if a utility's earned return on equity (ROE) is 10.5% and it fails to meet a 75-basis point target, funds will be set aside that will effectively decrease earned ROE to 9.75%. As an example, for a utility

with a $5 billion electric rate base and a 45% equity ratio, a 50-basis point ROE adjustment will result in an earning's reduction of about $16.5 million.

7. Utilities are required to maintain full documentation of all testing and inspections so that the condition of their systems and the progress of their efforts can be tracked. The utilities are also required to file annual reports on the status and results of their testing and inspections and to certify their compliance with the safety standards. The Commission will use these records and reports to monitor and audit utilities' compliance with the safety standards and verify achievement of the safety performance targets. Utilities also will be required to notify Department staff of all "shock" reports received, regardless of whether an injury was involved.

8. The National Electric Safety Code (NESC) is the national standard for the installation, construction, maintenance, and operation of electric utility facilities. To ensure that there is no confusion as to the minimum safety standards that will be acceptable in New York State, the Commission will formally require all utilities to adopt and fully comply with the NESC. However, in order not to reduce the level of safety applicable to electric utility operations in New York State, where the utilities' safety procedures are more stringent than the NESC, the utilities will comply with their own procedures.

The Commission will issue a written decision detailing today's vote and fully describing the safety standards. The decision in Commission Case 04-M-0159, when available, can be obtained from the Commission's Web site at **http://www.dps.state.ny.us** by accessing the Commission Documents section of the homepage. Many libraries offer free Internet access. The Commission's decision also can be obtained from the Commission's Files Office, 14th floor, 3 Empire State Plaza, Albany, NY 12223 (518-474-2500) and from the Commission's New York City offices at One Penn Plaza, New York, NY 10119 (212-290-4316).

-30-