

# PROPOSED RULEMAKING

## PENNSYLVANIA PUBLIC UTILITY COMMISSION

[52 PA. CODE CH. 57]

[L-00040167]

### Inspection and Maintenance Standards for the Electric Distribution Companies

The Pennsylvania Public Utility Commission, on April 20, 2006, adopted a proposed rulemaking order which seeks to implement minimum inspection, maintenance, repair and replacement standards on electric distribution companies (EDC) operation in this Commonwealth.

#### *Executive Summary*

The Electricity Generation Customer Choice and Competition Act (Act), 1996, Dec. 3, P.L. 802, No. 138 § 4, became effective January 1, 1997. The Act amends 66 Pa.C.S. (Public Utility Code or Code) by adding Chapter 28 to establish standards and procedures to create direct access by retail customers to the competitive market for the generation of electricity, while maintaining the safety and reliability of the electric system. Specifically, 66 Pa.C.S. § 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.

In our Final Rulemaking Order entered May 20, 2004, at L-00030161 *Rulemaking Re Amending Electric Service Reliability Regulations at 52 Pa. Code Chapter 57*, Final Rulemaking Order, the Commission declined at that time to require specific inspection and maintenance standards reasoning that technological advances continue to improve the inspection and testing process. The Commission asked companies to report their own internal inspection and maintenance standards. The Commission measured the EDCs' progress towards meeting their individual goals and considered this information along with whether the EDCs were meeting their reliability standards to determine whether service was deteriorating or not within a given service territory due to the fault of the EDC.

After the blackout of August 2003, new information arose which caused this Commission to reevaluate the need for specific inspection and maintenance standards. One of the causes of the blackout was the failure of FirstEnergy Corporation to adequately manage tree growth along transmission lines. *Final Report on the August 14 Blackout in the U.S. and Canada*, U.S.—Canada Power System Outage Task Force, pp. 17, 57-64 (April 2004).

This proposed rulemaking order seeks to implement minimum inspection, maintenance, repair and replacement standards on electric distribution companies operating in this Commonwealth. The Commission proposes to require an initial inspection and maintenance plan for upcoming calendar years due by October 1, 2007, and every 2 years thereafter. The plan shall detail a program

for the maintenance of poles, wires, conduits or other fixtures, along public highways or streets for the transmission or distribution of electric current, owned, operated, managed or controlled by a company in a format as Commission staff shall prescribe. These plans are subject to acceptance or rejection by Commission staff if the minimum inspection and maintenance intervals as outlined in Annex A, proposed regulation § 57.198(e) are not included in the plans. Annex A contains minimum standards for vegetation management, pole inspections, overhead line inspections, and substation inspections.

#### *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on September 27, 2006, the Commission submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Commission, the General Assembly and the Governor of comments, recommendations or objections raised.

Public Meeting held  
April 20, 2006

*Commissioners Present:* Wendell F. Holland, Chairperson; James H. Cawley, Vice Chairperson, concurring in result; Bill Shane; Kim Pizzigrilli, concurring in result, statement follows; Terrance J. Fitzpatrick

*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*

### **Proposed Rulemaking Order**

#### *By the Commission:*

Presently before this Commission for consideration are comments filed in response to the Commission's Advance Notice of Proposed Rulemaking Order adopted on November 18, 2004 and published at 34 Pa.B. 6550, on December 11, 2004. The Commission has reviewed the comments as well as inspection and maintenance standards from other States, and now enters this Proposed Rulemaking Order for public comment.

#### **Procedural History**

On May 7, 2004, the Commission entered a Final Rulemaking Order<sup>1</sup> at L-00030161 which amended the Electric Distribution Companies' (EDCs) reporting requirements found at 52 Pa. Code § 57.195. The Final Rulemaking Order improved the Commission's ability to monitor EDC service reliability.

Specifically, the Commission now receives quarterly and annual reliability reports as opposed to only annual reports. This allows the Commission to better track a

<sup>1</sup> On September 18, 2004, the Final Rulemaking Order was published in the *Pennsylvania Bulletin* at 34 Pa.B. 5135; thus, the regulations stemming from that Order are effective as of September 18, 2004.

company's performance and contact the company earlier regarding corrective action. The rulemaking also increased the amount of information an EDC must report to the Commission. EDCs must now provide the causes of outages and percentages categorized by type as well as an annual report of each company's plans for the upcoming year's inspection and maintenance of transmission systems including: (1) vegetation management; (2) distribution and substation maintenance activity; and (3) capital improvement projects. The EDC must report its own standards regarding vegetation management and other inspection and maintenance procedures. The EDC must report whether it is meeting its goals regarding inspection, maintenance and repair and, if not, explain what efforts are being made to do so in the future.

The Commission also determined that, based on more recent experience and information, the issue of whether EDCs should be subject to specific inspection and maintenance standards should be evaluated.

In particular, new information arising out of the blackout on August 14, 2003 formed a basis for evaluating the need for inspection and maintenance standards. One of the causes of the blackout was the failure to adequately manage tree growth along transmission lines. *Final Report on the August 14 Blackout in the U.S. and Canada*, U.S.-Canada Power System Outage Task Force, pp. 17, 57-64 (April 2004). In the wake of the blackout, the Federal Energy Regulatory Commission (FERC) commissioned a study of utility vegetation management practices. This led to a report entitled "Utility Vegetation Management Final Report" prepared by CN Utility Consulting, LLC and released by FERC in March, 2004. The report concluded, among other things, that the "[c]urrent oversight of UVM [utility vegetation management activities by appropriate agencies or organizations is overwhelmingly inadequate" (Report, p. 68).

To remedy this inadequacy, the report recommended that oversight organizations should work with the utilities, the utility vegetation management industry and other stakeholders to develop measurable and achievable program objectives to identify what can be done to reduce the likelihood of a recurrence of tree and power line conflicts. (Report at 68-69).

Furthermore, the Public Utility Code at 66 Pa.C.S. § 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.

In view of this provision, and in light of the national attention to inspection and maintenance standards with particular regard to vegetation management procedures, a rulemaking proceeding was initiated at this docket on November 18, 2004, to consider revising 52 Pa. Code, Chapter 57, relating to electric distribution reliability. See 34 Pa.B. 6550. Comments were filed by the following parties: AFL-CIO Utility Caucus (AFL-CIO), Allegheny Power, Citizens' Electric Company (Citizens), Duquesne

Light, Energy Association of Pennsylvania (EAP), FirstEnergy, Office of Consumer Advocate (OCA), Office of Small Business Advocate (OSBA), PECO Energy Company (PECO), PPL, Pennsylvania Utility Contractors Association (PUCA), UGI Electric, and Wellsboro Electric.

Comments were requested and received on the following topics:

1. *Whether it is appropriate for the Commission to adopt specific inspection and maintenance standards. If so, 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.*

A. *Parties in Favor of Establishing Regulations Setting Inspection and Maintenance Standards*

*Comments of the Office of Consumer Advocate*

The OCA comments that pursuant to Section 2802(20), the Commission must establish regulations regarding the inspection, maintenance, repair and replacement standards (I & M standards) for the distribution and transmission systems operated by Pennsylvania electric distribution companies (EDCs). The OCA fully supports standards and states that Ohio, California and New York have all established inspection and maintenance standards. The OCA believes the Commission should use New York as a guide in establishing its own regulations. The OCA further urges this 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 allow for flexibility in techniques and processes used, and will allow for further innovation. By establishing broad standards that set forth minimum requirements, industry practices should continue to develop.

OCA argues the Commission should 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 second tier though is that compliance with minimum standards does not serve as a "safe haven" for the EDC. The EDC must still maintain safe, adequate, reliable and reasonably continuous service as required by the Public Utility Code. It must meet its CAIDI, SAIFI and SAIDI<sup>2</sup> reliability standards on a quarterly and annual basis. An EDC that has failed to maintain adequate reliability cannot use as a defense that it met the Commission's minimum standards. Thus, the OCA suggests the Commission use both minimum standards and individual plan filings.

<sup>2</sup> CAIDI is Customer Average Interruption Duration Index. It is the average interruption duration of sustained interruptions for those customers who experience interruptions during the analysis period. CAIDI represents the average time required to restore service to the average customer per sustained interruption. It is determined by dividing the sum of all sustained customer interruption durations, in minutes, by the total number of interrupted customers. SAIFI is System Average Interruption Frequency Index. SAIFI measures the average frequency of sustained interruptions per customer occurring during the analysis period. SAIDI is System Average Interruption Duration Index. SAIDI measures the average duration of sustained customer interruptions per customer occurring during the analysis period. These indices are accepted national reliability performance indices as adopted by the Institute of Electrical and Electronics Engineers, Inc. (IEEE), and are defined with formulas at 52 Pa. Code § 57.192.

*Comments of the Pennsylvania Utility Contractors Association (PUCA)*

PUCA suggests the Commission establish minimum specific I & M standards. PUCA further proposed some standards based upon talks between nearly 300 contractors, subcontractors and suppliers throughout Pennsylvania. These standards concerned line hits, marking, depth, pre-construction meetings, subsurface utility engineering, the pulling of abandoned lines, and billing issues.

*Comments of the Pennsylvania AFL-CIO Utility Caucus*

The AFL-CIO argues the Commission is required to establish specific inspection and maintenance standards. The AFL-CIO states that the Act created or increased an incentive for EDCs and their holding companies to invest in non-utility ventures and created a potentially lethal combination of incentives including the promise of unrestricted profits on generation investments coupled with distribution rate caps that would prohibit utilities from receiving a full return on new distribution investments for an extended period of time. Section 2802(20) and other provisions of the Act were designed to ensure that the transition to, and ultimate attainment of, a restructured electricity market would not jeopardize the safety and reliability of regulated distribution service.

The AFL-CIO claims that the Act has been in effect for more than eight years, and, unfortunately in response to rate caps and changed investment incentives, Pennsylvania's EDCs have dramatically reduced their distribution work force, reduced their budgets for system maintenance and testing, and changed inspection and maintenance practices. AFL-CIO believes all EDCs in Pennsylvania should be held to the same minimum standards. There will be differences within a utility system that might require more frequent inspection or maintenance, but AFL-CIO submits that the Commission should establish statewide, minimum levels of performance. AFL-CIO proposed specific minimum standards designed to be applicable throughout Pennsylvania, without regard to the characteristics of the service area. It proposes a minimum inspection and treatment cycle for vegetation management of four years for distribution facilities and 5 years for transmission facilities. Additionally, if a circuit experiences 5 or more trips during a 12-month period, it should be scheduled for an immediate vegetation inspection. Finally, utilities should be encouraged to increase the frequency of their inspection cycles if their service areas experience a wetter than normal growing season. AFL-CIO further proposes minimum standards for pole inspections, transmission line inspections, distribution line inspections by foot patrol, substations, transformers, reclosers and other types of inspection and maintenance practices.

The AFL-CIO further comments that all EDCs in Pennsylvania should be held to the same minimum standards. There always will be differences within a utility system that might require more frequent inspection or maintenance, but AFL-CIO submits that the Commission should establish statewide, minimum levels of performance. AFL-CIO does not like the Ohio model of utility-specific standards set by each utility. It is not effective and is difficult to enforce. The AFL-CIO argues if an EDC is having difficulty meeting its reliability benchmarks, or is otherwise not able to provide safe and reliable service to its customers, by following the statewide minimum standards, then the EDC should adopt a more frequent inspection and maintenance cycle.

*Comments by the Office of Small Business Advocate*

The OSBA commented that the Commission should concentrate on holding each EDC accountable for meeting the SAIFI, CAIDI and SAIDI standards which are already in place and use the imposition of prescriptive requirements only as part of corrective action ordered under 52 Pa. Code § 57.197. OSBA further recommends that if there are levels of SAIFI, CAIDI and SAIDI which are nationally recognized as evidence of satisfactory reliability, the Commission should require each Pennsylvania EDC to achieve those levels. If there is not a nationally recognized standard, the Commission should require each EDC to achieve results on the SAIFI, CAIDI and SAIDI which are no worse than the average of the standards for all Pennsylvania EDCs which the Commission set at Docket No. M-00991220. Under such an approach, each EDC would be required to achieve the higher of its own SAIFI, CAIDI and SAIDI standards or the statewide average standards for SAIFI, CAIDI, and SAIDI. OSBA recommends that, if an EDC fails to achieve the reliability index standard for a calendar year or 4 quarters, the Commission should automatically initiate an investigation under 52 Pa. Code § 57.197(a). If the EDC is unable to justify its violation, the Commission should order the EDC to implement a corrective action plan. If the EDC fails to adhere to the plan, the Commission should then impose civil penalties in accordance with 66 Pa.C.S. § 3301. Under no circumstances should the EDC be permitted to recover those penalties from ratepayers.

*B. Parties Opposed to the Creation of Regulations Setting Inspection and Maintenance Standards*

*Comments of the Energy Association of Pennsylvania*

The Energy Association of Pennsylvania (EAP) opposes establishing prescriptive inspection and maintenance standards. The EAP argues the Commission has already met its statutory responsibilities under 66 Pa.C.S. § 2802(20) through its regulations at 52 Pa. Code § 57.194. The EAP argues that it is sufficient that there are regulations at 52 Pa. Code Chapter 57 which require EDCs to make periodic inspections of their equipment and facilities in accordance with 52 Pa. Code § 57.194(c), "to strive to prevent interruptions of electric service and, when interruptions occur, restore service within the shortest reasonable time", in accordance with 52 Pa. Code § 57.194(d), and to "design and maintain procedures to achieve the reliability performance standards established under subsection (h)." The EAP argues the New York standards adopted in January, 2004 are too new to be effectively evaluated. California's standards adopted in 1997 were not the determining factor in the reliability issues the people of California endured since the deregulation of electric generation. The EAP criticizes the AFL-CIO's comments. The EAP states that the AFL-CIO's comments fail to recognize the major EDC capital expenditures undertaken since the inception of the Act. For example, EAP claims that since the Act, there have been significant capital investments by the EDCs in remotely operated electronic reclosers. These devices are used to isolate outages and thereby improve reliability.

Moreover, the Energy Association opposes setting standards which would be the same for EDCs operating in Pennsylvania. EAP argues individual EDC service territories can vary significantly and the systems and service territories have many differences such as percentage of overhead versus underground, mountainous terrain versus flat, and rural or urban settings. EDCs presently utilize numerous and various company-specific inspection techniques and reliability-targeted programs for predic-

tive and preventive maintenance to improve reliability. Variances exist between systems such as operating voltage, ampacity, load characteristics, number of phases, and grounded wye versus delta, and there are differences in components such as type, style, functionality, application, manufacturer and vintage.

*Comments of Allegheny Power*

Allegheny Power believes the inspection and maintenance standards are not necessary to ensure reliable electric delivery in Pennsylvania. Allegheny Power argues that establishing I & M standards while simultaneously mandating reliability benchmarks will hinder a company's flexibility to achieve efficiencies in work processes.

*Comments of Duquesne Light Company*

Duquesne believes that it is not appropriate for the Commission to adopt specific I & M standards. Setting I & M standards while also requiring performance meeting reliability benchmarks removes a company's ability to manage its own work processes in order to work at its most efficient levels to meet its performance goals. Utilities use various company-specific combinations of predictive maintenance, preventive maintenance, reliability-centered maintenance and inspection techniques to manage reliability. Duquesne argues uniform standards across all EDC types or specific standards for each EDC are not appropriate.

*Comments of Pike County Light and Power*

Pike County is one of the smaller EDCs operating in Pennsylvania. It commented that this Commission does not have to adopt inspection and maintenance standards in order to ensure reliable electric delivery service in Pennsylvania. Pike County argues that mandating the reliability performance benchmarks that an EDC must satisfy, while also mandating the content of I & M standards, will severely hamper the flexibility of an EDC to meet its reliability standards cost-effectively, as well as hinder its ability to achieve efficiencies in work processes. Instead of minimum standards, Pike recommends that the Commission establish certain broad reliability criteria and afford individual utilities the flexibility to meet such criteria in the most efficient, cost-effective manner. Any standards adopted by the Commission must not conflict with similar standards adopted by FERC or the PJM Interconnection. Finally, the Commission should consider exempting a small utility like Pike from all or parts of such requirements.

*Comments of UGI Utilities, Inc.—Electric Division*

UGI argues the Commission should not adopt the prescriptive and unnecessary inspection and maintenance standards advocated by the OCA and AFL-CIO. The Commission already established new rules for the monitoring and enforcement of new electric reliability standards, and these rules should be given a reasonable opportunity to achieve their desired purpose. UGI comments the North American Reliability Council (NERC) already is establishing guidelines for vegetation management along transmission lines and the Commission should not attempt to duplicate this effort.

*Comments of PECO Energy Company*

PECO believes the development of standards is unnecessary at this time. The recently adopted reliability regulations are an ample means of addressing inspection and maintenance programs and their impact on reliability. The complex nature of transmission and distribution systems and the large number of variables that exist within each individual system make the creation of such

standards impractical due to the lack of flexibility inherent in regulatory provisions. PECO argues both the spirit and the letter of Section 2802(20) requirements have been met. The section does not mandate adoption of further inspection and maintenance standards when the PUC has satisfied the objective of "continuing and ensuring the reliability of electric service" through other regulations. Further, PECO believes to set one standard to which all EDCs would be held would be impractical. In order to accommodate all the variances that exist in each system and among each EDC, the standards would have to be broadly written, which would have no meaningful effect on reliability. Further, there are no historic records the Commission would be able to use in developing a fair standard applicable to all EDCs across Pennsylvania.

*Comments of Citizens' Electric Company*

Citizens believes it is not necessary for the PUC to adopt inspection and maintenance standards to ensure continued reliable electric delivery service in Pennsylvania. Citizens claims a uniform standard for the entire state may require an EDC to perform work that does not generate a measurable reliability benefit and will consequently limit the efficiency and flexibility of an individual EDC to direct resources in accordance with its own reliability program priorities. Any mandated expansion of an EDC's existing inspection and maintenance program must have a corresponding quantifiable value or benefit for its customers. Due to its small service territory, Citizens generally has direct knowledge of specific threats and deterioration of its system reliability and can therefore direct corrective action toward these issues as needed.

*Comments of FirstEnergy*

Met-Ed, Penelec and Penn Power (collectively FirstEnergy) comment that specific I & M standards are unnecessary. Each EDC should develop its own company specific I & M standards that are available for review by the Commission. This would take into account the differences among EDCs while optimizing the opportunity to improve reliability. FirstEnergy claims the differences between EDCs includes percentage of overhead versus underground lines, mountainous terrain versus flat and rural versus urban areas. FirstEnergy claims that a set of uniform and specific I & M standards could detrimentally impact an EDC's operational efficiency, cost effectiveness, and reliability performance due to the variations that exist among the EDCs. Further, if the Commission monitors EDC compliance through requiring regular progress reporting and self-certification towards completing its work plan, it is not necessary for the Commission to impose I & M standards.

*Comments of Wellsboro Electric Company*

Wellsboro Electric Company (Wellsboro) believes it is not necessary for the Commission to adopt inspection and maintenance standards to ensure reliability service in Pennsylvania. Wellsboro needs flexibility in management of its distribution system and the allocation of its resources and equipment to the specific areas that will provide the greatest increase in reliability. Wellsboro has a small territory and its employees can observe a large portion of the system on any given day during the normal course of business and are directed to be observant of the system and report or repair anything that could potentially cause a problem on the system. Wellsboro believes that uniform standards across all EDCs would not be effective or productive for an individual EDC.

*Comments of PPL Electric Utilities Corporation (PPL)*

PPL believes that specific inspection and maintenance standards are unnecessary and would impose a significant burden on the Commission and all EDCs and would be counterproductive. Prescriptive rules are likely to stifle the development of creative and innovative methods to maintain and enhance system reliability.

2. *What standards, if any, should be created regarding vegetation management practices, pole inspections, transmission and distribution line inspections, substations, transformers, reclosers, and other types of inspection and maintenance practices.*

*Comments of the AFL-CIO*

The AFL-CIO commented that the statewide minimum inspection and treatment cycles for vegetation management should be four years for distribution facilities and five years for transmission facilities. Additionally, if a circuit experiences five or more trips during a 12-month period, it should be scheduled for an immediate vegetation inspection. Utilities should be encouraged to increase the frequency of their inspection cycles if their service areas experience a wetter than normal growing season. AFL-CIO comments the statewide minimum inspection cycle for distribution poles should be 10 years. Pole tests should include drill tests at and below ground level, a shell test, visual inspection for holes or evidence of insect infestation, a visual inspection for evidence of unauthorized backfilling or excavation near the pole, visual inspection for signs of lightning strikes and a load calculation. If a pole exhibits 67% or less of the strength of a new pole of comparable size, then it should be replaced within 60 days. If a pole fails the ground line inspection, shows dangerous levels of rot or infestation, or otherwise exhibits dangerous conditions, it should be replaced as soon as possible, but no later than 30 days.

Transmission lines should be inspected aerially twice per year in the spring and fall. They should be inspected on foot every two years. The integrity of transmission towers should be inspected and tested at least once every 25 years. AFL-CIO notes that the increased use of ground patrols and aerial surveillance for high-voltage transmission lines also has been recommended by the Department of Homeland Security. If any problems are found that affect the integrity of the circuit, they should be repaired or replaced as soon as possible, but not later than 30 days.

Distribution lines should be inspected by foot patrol once per year. If any problems are found that affect the integrity of the circuit, they should be repaired or replaced as soon as possible, but not later than 30 days. Less severe problems should be scheduled for repair or replacement within one year. Substation equipment, structures and hardware should be inspected monthly. Substation circuit breakers should undergo operational testing at least once per year, diagnostic testing at least once every 4 years, and comprehensive inspection and maintenance on a 4-year cycle.

Transformers should be visually inspected annually as part of the distribution line inspection. Inspections should include checking for rust, dents or other evidence of contact, leaking oil, broken insulators, and any other conditions that may affect operation of the transformer. Above-ground pad-mounted transformers should be inspected on a 2-year cycle, which would include checking for rust, dents or other evidence of contact, leaking oil, installation of fences or shrubbery that could affect access to and operation of the transformer, and unauthorized excavation near the transformer.

Reclosers should be inspected and tested at least once per year. Electronic reclosers should be inspected at least every 2 years, but more frequently depending on their use. Reclosers in substations should be inspected monthly. Other critical system facilities include group-operated line switches (which should be inspected and tested annually), relays (inspected and tested every 2 years). Underground vaults with larger connections should be visually inspected and thermo-vision tested for hot spots annually. In addition, vaults, regardless of size, should be visually inspected and cleaned once per year.

*Comments of the EAP*

The EAP commented that an individual EDC should preserve flexibility to modify its own program approaches and resources in order to maintain its system to meet reliability targets. Requiring fixed maintenance practices could hinder opportunities for improvement. Further, FERC and NERC are developing Transmission Vegetation Standards to prevent further blackouts, so there is no need for the Commission to develop its own.

*Comments of FirstEnergy*

FirstEnergy commented that the Commission can assist EDCs by imposing regulation that mitigates jurisdictional barriers to implementing an EDC's I & M program. Examples include Commission regulations that supercede local city, borough and other municipal ordinances that may attempt to limit tree pruning, removal of vegetation, the use of herbicides or that require stump removals, all of which are impediments to completing required and essential vegetation management in a cost effective and timely manner. FirstEnergy encourages the Commission to impose regulation supporting removal of non-compatible vegetation on transmission rights-of-way, use of herbicides and state level interdepartmental cooperation among agencies such as the Game Commission, Department of Environmental Protection and Department of Conservation and Natural Resources.

*Comments of Duquesne Light*

Duquesne Light commented that each EDC has its own frequencies for inspecting and maintaining equipment and managing vegetation cycles. The Commission has the authority to review and approve these cycles. If EDC reliability targets are not achieved, further actions can be addressed between the Commission and that company, as is currently done, on a case specific basis.

*Comments of Citizens*

Citizens commented it is not practical to establish a single common standard for uniform application to the wide variety of situations that exist among the various EDCs serving Pennsylvania. Citizens is concerned statewide standards will restrict efficiency and could lead to unnecessary expenditures to perform low value tasks.

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

*Comments of The EAP*

The EAP does not recommend specific repair and maintenance standards to be adopted for critical electric distribution equipment and facilities. Actual system design and configuration for each EDC and specific circuit or component status and current configuration for each EDC will factor into the "criticality" of an individual piece of equipment or facility. The dynamic nature of a distribution system would make it extremely difficult to define "criticality" and specify appropriate repair standards per-

herent to system configuration at any given moment. Factors include circuit configuration, system loading, status of adjacent components or circuits and weather forecasts. Equipment and facilities that are critical to system reliability receive the most attention in terms of design, investment in redundant systems, back-up systems, automated monitoring, inspection, preventative maintenance, priority of corrective maintenance, minor upgrades, major upgrades, spares, total replacement, and design changes to reduce risk.

*Comments of FirstEnergy*

FirstEnergy commented there are no distribution facilities designated as critical to system reliability. The East Central Area Reliability Transmission System Performance Panel is developing criteria to be used to develop such a list. PJM has not designated any critical transmission facilities below 230 kV. Facilities above 230 kV are maintained in accord with NERC requirements.

*Comments of Duquesne Light*

Duquesne Light commented the definition of "critical" would be subjective and would depend on multiple variables.

4. *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 that is at question.*

*A. Parties in Favor of Establishing Automatic Civil Penalties*

*Comments of the Office of Consumer Advocate*

The OCA supports pre-established consequences for failure of an EDC to meet a reliability requirement. Some states have implemented a system of financial penalties for failure to achieve reliability performance or inspection and maintenance performance. New York PSC, in its recent safety standards, implemented a performance mechanism for failure to achieve the stated inspection targets. NY Safety Standards, Section 10. Failure to achieve stated target for stray voltage testing results in a 75 basis point rate adjustment to the return on equity. 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.

OCA recommends the Commission consider using a financial mechanism to better ensure that reliability is maintained and that the EDC's statutory obligations are met. 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. OCA further recommends 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.

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. 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 plan.

*B. Parties Opposed to Establishing Automatic Civil Penalties*

*Comments of the EAP*

The EAP commented establishing additional penalties in the regulations is unnecessary, duplicative and confusing. It is duplicative of the Pennsylvania Public Utility Code (66 Pa.C.S. Section 3301) which allows the Commission to assess civil penalties already.

*Comments of the AFL-CIO*

The AFL-CIO does not believe that automatic civil penalties are an appropriate enforcement mechanism for inspection and maintenance standards. There could be legitimate reasons why a utility did not precisely meet an inspection and maintenance cycle. For example, if there is a serious storm that diverts the skilled work force to restoration and repair work for an extended period, that work would take precedence over routine inspection and maintenance. If, however, the utility continually exhibits an inability to meet the required inspection and maintenance cycles, then the Commission should consider the imposition of serious penalties.

The AFL-CIO does believe it would be reasonable to establish monetary penalties if a utility fails to repair or replace critical or dangerous facilities within a stated period of time. Failing to repair dangerous conditions or replace dangerous and defective equipment poses a danger to utility workers and the public. If the Commission establishes mandatory repair or replacement intervals for critical facilities or dangerous conditions, as AFL-CIO has recommended, then those standards should be enforced through automatic civil penalties of \$1,000 per day for each day that the violation continues after the mandated repair interval, as authorized by 66 Pa.C.S. § 3301.

*Comments of FirstEnergy*

FirstEnergy commented automatic penalties should not be imposed on EDCs that fail to meet I & M standards. There are factors outside of an EDC's control, such as weather, that impact an EDC's ability to conduct inspections and maintenance. As with other reliability-related regulations, there should be a process for further discussion to determine causation and whether or not further action is necessary.

*Comments of Duquesne Light*

Duquesne Light commented that any penalties or rewards, if deemed necessary by the Commission, should be based upon the EDC's performance (the reliability indices) and not on I & M practices and standards. An EDC's management of its own system maintenance is reflected in its performance measures.

*Comments of PECO*

PECO commented that there should not be automatic penalties. Should the Commission choose to develop inspection and maintenance standards, it should avoid imposing automatic penalties.

*Comments of Citizens*

Citizens' commented that establishing automatic penalties will limit the Commission's ability to exercise judgment when considering the facts surrounding specific inspection and maintenance issues. Additionally, many factors can affect the completion of maintenance activities. These range from weather to availability of equipment, material and contractors. If such circumstances

arise that cause an unavoidable delay to the completion of an EDC's inspection and maintenance program, an automatic penalty will not change an EDC's response to these circumstances which are beyond its control.

### Discussion

Many state commissions have some guidelines regarding inspection and maintenance standards. At least three have regulations or policies on tree trimming: Maryland<sup>3</sup>, Ohio<sup>4</sup> and Oregon<sup>5</sup>. Five states have rules regarding inspection of facilities: Iowa<sup>6</sup>, Kentucky<sup>7</sup>, Ohio, Oregon and Wisconsin, Delaware<sup>8</sup>, New Jersey<sup>9</sup>, Michigan<sup>10</sup> and Massachusetts<sup>11</sup> are in the process of developing standards for inspection and maintenance. California<sup>12</sup> and New York<sup>13</sup> have adopted inspection standards for various system components. Connecticut requires detailed electric wire maintenance plans by regulation. Indiana has no standards yet, but is exploring the issue further.

Apparently, no state presently sets forth cycles for vegetation control. Of the states that have adopted inspection standards, five set forth prescriptive standards for the inspection of the distribution system. Many states have adopted the NESC as the standard for the installation, operation and maintenance of electrical systems.

The inspection and maintenance reporting requirements of Ohio, New York and California include such items as: a plan for future investment in transmission and distribution facilities to ensure service reliability; a report of the plan's implementation for the previous annual reporting period; and a list and purpose of current inspection, maintenance, repair and replacement plans including goals and achievements. We find portions of these states' reporting requirements to be suitable for Pennsylvania's needs.

We are persuaded to act like Ohio to add minimum intervals of inspection and maintenance standards for EDCs regarding their circuits and equipment. See 2003 OH Reg 4901:1-10-27. Ohio has adopted specific inspection and maintenance standards, i.e., all transmission circuits and equipment must be inspected at least once every year. At least one-fifth of all distribution circuits and equipment shall be inspected annually. All distribution circuits and equipment must be inspected at least once every 5 years. This, taken with the AFL-CIO and PUCA's suggested minimal standards in Pennsylvania, leads this Commission to believe some minimal standards should be in place in Pennsylvania. If an EDC is inspecting or repairing its equipment and lines faster than the minimal intervals, that is to be commended. We do not want to encourage companies that have shorter intervals to expand their existing intervals.

<sup>3</sup> Maryland Regulations Title 20, Subtitle 50, Service Supplied by Electric Companies.

<sup>4</sup> See 2003 OH Reg 4901:1-10-27

<sup>5</sup> Oregon Administrative Rules, Chapter 860, Public Utility Commission Division, Subchapter 23, Service Standards

<sup>6</sup> See *In Re: Midamerican Energy Company*, 2003 Iowa PUC Lexis 112, March 14, 2003. 199 IAC 20.18(7)(h)(2).

<sup>7</sup> 807 KAR 5:041. Electric Regulations

<sup>8</sup> Delaware Public Service Commission Order No. 5183, Docket No. 99-328, initiating an investigation into causes for electric service outages on January 14, 2003.

<sup>9</sup> New Jersey Board of Public Utilities made a straw proposal for regulations on vegetation management standards in October, 2003 pursuant to the Electric Discount and Competition Act of 1999, *N.J.S.A. 48:3-49 et seq.*

<sup>10</sup> *In the Matter of the Investigation into Methods to Improve the Reliability of Electric Service in Michigan*, Case No. U-12270, Order, December 20, 2001.

<sup>11</sup> *Investigation to Establish Guidelines for Service Quality Standards for Electric Distribution Companies and Local Gas DTE 99-84*, opened October 29, 1999.

<sup>12</sup> See *Public Utilities Commission of the State of California Inspection Cycles for Electric Distribution Facilities*, effective March 1, 1997, D.97-03-070 in I.95-02-015 and R.96-11-004. *In Re Electric Distribution Facility Standard Setting*, 1997 Cal. PUC LEXIS 1243, 7-8; 71 CPUC2d 471 (March 31, 1997).

<sup>13</sup> *New York Public Service Commission Safety Standards; Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems*, Docket No. 04-M-0159, 2005 NY PUC LEXIS 2 (Jan. 5, 2005).

At the same time, EDCs which are violating their reliability indices' standards on a consecutive quarterly basis and which have longer intervals than the ones we recommend here today in the attached Annex A ought to be encouraged to increase their efforts at improving the reliability of their systems. The customers of Pennsylvania have a need for reliable electric service, and the establishment of further reliability regulations with minimal interval standards for inspections and maintenance of EDC systems is crucial to ensuring service does not deteriorate in our state. We propose joining other states in requiring more detailed inspection and maintenance plans from the EDCs and in establishing minimum I & M standards.

Connecticut, for example, has a statute which provides in pertinent part:

*§ 16-32g. Electric wire maintenance plans. Regulations*

Not later than January 1, 1988, each electric or electric distribution company shall submit to the Department of Public Utility Control a plan for the maintenance of poles, wires, conduits or other fixtures, along public highways or streets for the transmission or distribution of electric current, owned, operated, managed or controlled by such company, in such format as the department shall prescribe. Such plan shall include a program for the trimming of tree branches and limbs located in close proximity to overhead electric wires where such branches and limbs may cause damage to such electric wires. The department shall review each plan and may issue such orders as may be necessary to ensure compliance with this section. The department may require each electric or electric distribution company to submit an updated plan at such time and containing such information as the department may prescribe. The department shall adopt regulations, in accordance with the provisions of chapter 54 to carry out the provisions of this section.

16 Conn. Gen Stat. § 277.16-32g (2004).

In the Commission's judgment, the establishment of regulations governing the filing, review and approval of inspection and maintenance plans by EDCs would be consistent with our statutory duties under section 1501 pertaining to the obligation to ensure "adequate, efficient, safe and reasonable service and facilities," 66 Pa.C.S. §§ 1501, and Section 2802(20) pertaining to the establishment of "inspection, maintenance, repair and replacement standards . . .," 66 Pa.C.S. § 2801(20). Indeed, given the fundamental industry changes brought about by electric restructuring in this state and nationwide, as well as the inadequate regulatory oversight in this area identified in the wake of the 2003 blackout, it would be unwise to not require some additional information and safeguards to ensure electric system reliability for the benefit of Pennsylvania's citizens.

Therefore, we propose to require an initial inspection and maintenance plan for upcoming calendar years due by all electric distribution companies operating within the Commonwealth due by October 1, 2007 and every 2 years thereafter. A deadline of October 1 should allow ample time for Commission staff review and changes to be made before the plan is implemented in the upcoming calendar year.

The plan should be broken down into plans for rural versus urban areas within an EDC's service territory. The definition of an urban area shall be the same as in 67

Pa. Code § 445.2 as follows: "An urbanized area or an urban place designated by the United States Bureau of Census as having a population of 5,000 or more and whose boundaries have been approved by the Secretary of the United States, Department of Transportation." A rural area shall be an area with a population less than 5,000. We invite comment regarding how the rural and urban definitions should be defined.

The plan shall detail a program for the maintenance of poles, wires, conduits or other fixtures, along public highways or streets for the transmission or distribution of electric current, owned, operated, managed or controlled by such company, in such format as Commission staff shall prescribe. The plan shall include a program for the trimming of tree branches and limbs located in close proximity to overhead electric wires where the branches and limbs may cause damage to the electric wires. The plan shall also include an inspection cycle of off-right of way trees and vegetation to curtail the outages which may be caused by off-right-of-way vegetation.

These plans, once submitted, are subject to rejection by Commission staff if the minimum inspection and maintenance intervals as outlined in Annex A, proposed regulation § 57.198(e) are not included in the plans. For example, regarding vegetation management, if the plan does not include 4-year tree trimming cycles for distribution lines, and 5-year tree-trimming cycles for transmission lines, then it will be rejected.

The plans should include but not be limited to the following facilities: poles and towers, conductors, pad-mounted transformers, line reclosers, line capacitors, right-of-way vegetation control, off right-of-way vegetation control if seen to be a cause of outages, and substations. The EDC should further include supporting justification and rationale based upon historical practices and procedures used by the EDC over the past 5 years. Acceptance of the plans will be based upon performance as documented in subsequent quarterly and annual reports. Commission Staff will review the EDCs' performances and shall open investigations if necessary.

If during the 2-year interval between plan submissions, the EDC intends to change its plans from those which were previously submitted and approved, a filing must be made with the Commission requesting approval of the change. Changes requested during the year should be filed at the time of the quarterly reliability reports and an addendum to the plan should be attached to the quarterly reliability report. Prospective and past changes to the plan must be approved by Commission Staff.

Finally, we propose in § 57.198(e) that each plan contain minimum I & M standards, including statewide minimum inspection and treatment cycles for vegetation management of 4 years for distribution facilities and 5 years for transmission facilities. We are aware that some of the EDCs, especially the smaller EDCs may have cycles currently that are longer than four years for their distribution facilities. We invite EDCs to comment as to their current vegetation management and tree-trimming cycles and advocate a position regarding what a reasonable vegetation management standard should be. We further propose a pole inspection standard of distribution poles being visually inspected every 10 years. This is in accordance with the comment from the AFL-CIO. We invite comment regarding this proposal. We further propose monthly inspections of substation equipment, structures and hardware. We propose overhead line inspections and maintenance standards similar to the AFL-CIO's proposal. We believe establishing minimum I & M

standards is in accordance with 66 Pa.C.S. § 2801(2) and it can serve to strengthen reliability across the Commonwealth. Finally, we propose requiring shorter I & M intervals if an individual circuit has SAIDI, SAIFI or CAIDI indices that are above their standards thus indicating a need to increase surveillance of system equipment.

We are not persuaded at this time to impose automatic civil fines or penalties for violation of the minimum standards. Neither are we persuaded to propose automatic rate changes to the companies for failure to meet an I & M standard. Conversely, we do not propose financial incentives for each EDC meeting its I & M standards. Each violation will be reviewed on a case-by-case basis.

The Commission is not persuaded to establish minimum SAIDI, SAIFI and CAIDI reliability indices standards that would be applicable to all EDCs at this time. The Act required the Commission to regulate the EDCs such that performance would not deteriorate. The Act does not require an improvement of service reliability in some EDC territories from their performance prior to the Act. Thus, standards regarding reliability must be tied to the historical performance of each EDC prior to the effective date of the Act.

Accordingly, under 66 Pa.C.S. § 501, § 1501 and § 2801, et seq., and the regulations promulgated thereunder 52 Pa. Code §§ 57.191—57.197; and sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and the regulations promulgated thereunder 1 Pa. Code §§ 7.1, 7.2 and 7.5; section 204(b) of the Commonwealth Attorneys Act (71 P. S. § 732.204(b)); section 5 of The Administrative Code of 1929 (71 P. S. § 232) and the regulations promulgated thereunder 4 Pa. Code §§ 7.231—7.234, we are considering adopting the proposed regulations set forth in Annex A; *Therefore,*

*It Is Ordered That:*

1. This proposed rulemaking docket be opened to consider the regulations as set forth in Annex A.
2. The Secretary submit this proposed rulemaking order and Annex A to the Office of Attorney General for review as to form and legality and to the Governor's Budget Office for review of fiscal impact.
3. The Secretary shall submit this order and Annex A for review and comment by the designated standing committees of both Houses of the General Assembly, and for review and comment by the Independent Regulatory Review Commission.
4. The Secretary certify this order and Annex A and deposit them with the Legislative Reference Bureau to be published in the *Pennsylvania Bulletin*.
5. Interested parties have 30 days from the date of publication in the *Pennsylvania Bulletin* to file an original and 15 written comments to the Pennsylvania Public Utility Commission, Attention: Secretary James J. McNulty, P. O. Box 3265, Harrisburg, PA 17105-3265.
6. An electronic copy of the comments should be e-mailed to Elizabeth Barnes, Assistant Counsel, ebarnes@state.pa.us. These comments will be placed on the Commission's website for public viewing at www.puc.state.pa.us.
7. Comments should, when appropriate, address the four issues identified in this order and should include, when applicable, a numerical reference to Annex A which the comments address, proposed language for revision and a clear explanation for the recommendation.



8. EDCs are directed to provide the Commission with their current inspection and maintenance intervals for vegetation management and other intervals mentioned in § 57.198(e).

9. A copy of this order and Annex A be filed at Docket No. M-00991220 and Docket No. L-00030161.

10. A copy of this order and Annex A be served upon EDCs operating in this Commonwealth, the Office of Consumer Advocate, the Office of Small Business Advocate, the AFL-CIO Utility Caucus, the Pennsylvania Utility Contractors Association and the Energy Association of Pennsylvania.

11. The contact persons for this proposed rulemaking are Blaine Loper, Bureau of Conservation, Economics and Energy Planning, (717) 787-3810 (technical) and Elizabeth Barnes, Law Bureau, (717) 772-5408 (legal).

JAMES J. MCNULTY,  
*Secretary*

**Fiscal Note:** 57-248. No fiscal impact; (8) recommends adoption.

**Statement of Commissioner Kim Pizzigrilli**

*Public Meeting  
April 20, 2006*

*Proposed Rulemaking for Revision of 52 Pa. Code Chapter 57 Pertaining to Adding Inspection and Maintenance Standards for the Electric Distribution Companies; APR-2006-L-0011\*; Doc. No. L-00040167*

Today, before the Commission is a Proposed Rulemaking Order that establishes regulations governing the filing, review and approval of inspection and maintenance plans by Electric Distribution Companies (EDCs). The Proposed Rulemaking Order sets forth proposed standards based upon comments filed in response to the Advance Notice of Proposed Rulemaking adopted on November 18, 2004 and published in the *Pennsylvania Bulletin* on December 11, 2004 (34 Pa.B. 6550).

While I concur with the adoption of inspection and maintenance standards to require additional information and safeguards to ensure electric system reliability for all Pennsylvania citizens, I look forward to comments being filed in response to the proposed regulations, as they will aide the Commission in striking the appropriate balance regarding what is necessary to ensure system reliability but also recognizing the differences among our EDCs, their service territories, age of systems and existing inspection and maintenance programs.

Some specific issues of interest include the Office of Consumer Advocate comments that urge 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; other parties opposition to the creation of regulations setting prescriptive inspection and maintenance standards and parties' positions on the proposal to include definitions of rural and urban areas and its effect on EDC territories and existing programs. Further, I look forward to comments regarding the proposed requirement to submit inspection and maintenance plans; the frequency of the submission of such plans and the approval process. Finally, I request that commentators address whether the proposed minimum inspection and maintenance intervals for vegetation management; pole inspections; overhead line inspections; and substation inspections are reasonable and whether the specificity is necessary to ensure system reliability or

whether the Commission should provide greater flexibility to the EDCs by enabling them to file such detailed information in its plan.

In reviewing the comments on these issues as well as the others raised in the proceeding, it is my goal to ensure that the Commission adopt inspection and maintenance standards that achieve a fair balance among the affected parties.

**Annex A**

**TITLE 52. PUBLIC UTILITIES  
PART I. PUBLIC UTILITY COMMISSION  
Subpart C. FIXED SERVICE UTILITIES  
CHAPTER 57. ELECTRIC SERVICE  
Subchapter N. ELECTRIC RELIABILITY STANDARDS**

**§ 57.192. Definitions.**

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

\* \* \* \* \*

**Rural area**—A rural place designated by the United States Bureau of Census as having a population of less than 5,000 and whose boundaries have been approved by the Secretary of the United States Department of Transportation.

\* \* \* \* \*

**Urban area**—An urbanized area or an urban place designated by the United States Bureau of Census as having a population of 5,000 or more and whose boundaries have been approved by the Secretary of the United States Department of Transportation.

**§ 57.198. Inspection and maintenance standards.**

(a) An EDC shall have a plan for the periodic inspection and maintenance of poles, overhead conductors and cables, wires, transformers, switching devices, protective devices, regulators, capacitors, substations and other facilities critical to maintaining an acceptable level of reliability, in a format the Commission prescribes. The Commission will review each plan and may issue orders to ensure compliance with this section. The Commission may require an EDC to submit an updated plan at any time containing information the Commission may prescribe.

(1) The plan must be based on industry codes, National electric industry practices, manufacturers' recommendations, sound engineering judgment and past experience. The plan must be divided into rural and urban areas. The plan must take into account the broad minimum inspection and maintenance intervals provided for in subsection (e).

(2) An EDC shall reduce the risk of future service interruptions by accounting for the age, condition, design and performance of system components and by providing adequate resources to maintain, repair, replace and upgrade the system.

(3) The plan must include a program for the maintenance of minimum clearances of vegetation from the EDC's overhead transmission and distribution facilities sufficient to avoid contact under design-based conditions. The plan must include a

program for the trimming of tree branches and limbs located in close proximity to overhead electric wires when the branches and limbs may cause damage to the electric wires regardless of whether the trees in question are on or off of a right-of-way.

(4) The plan, or updates to the plan, must form the basis of, and be consistent with, the EDC's inspection and maintenance goals and objectives included in subsequent annual and quarterly reliability reports filed with the Commission.

(b) On or before October 1, 2007, and every 2 years thereafter, an EDC shall submit its whole plan for the following calendar year to the Commission for review.

(1) Within 90 days, the Commission or its designee will accept or reject the plan.

(2) Absent action by the Commission or its designee to reject the plan within 90 days of the plan's submission to the Commission, or by January 1, whichever is later, the plan will be deemed accepted. The acceptance will be conditioned upon the EDC meeting Commission-established reliability performance standards.

(3) If the plan is rejected, in whole or in part, by the Commission or its designee, the EDC shall be notified of the plan's deficiencies and directed to resubmit a revised plan, or pertinent parts of the plan, addressing the identified deficiencies, or submit an explanation why the EDC believes its plan is not deficient.

(c) An EDC may request approval from the Commission for revising an approved plan. An EDC shall submit to the Commission, as an addendum to its quarterly reliability report, prospective and past revisions to its plan and a discussion of the reasons

for the revisions. Within 90 days, the Commission or its designee will accept or reject the revisions to the plan.

(d) An EDC shall maintain records of its inspection and maintenance activities sufficient to demonstrate compliance with its transmission and distribution facilities inspection, maintenance, repair and replacement programs as required by subsection (e). The records shall be made available to the Commission upon request within 30 days.

(e) An EDC shall maintain the following minimum inspection and maintenance intervals:

(1) *Vegetation management.* The Statewide minimum inspection and treatment cycles for vegetation management are 4 years for distribution facilities and 5 years for transmission facilities.

(2) *Pole inspections.* Distribution poles shall be visually inspected every 10 years.

(3) *Overhead line inspections.* Transmission lines shall be inspected aurally twice per year in the spring and fall. Transmission lines shall be inspected on foot every 2 years. Distribution lines shall be inspected by foot patrol a minimum of once per year. If problems are found that affect the integrity of the circuits, they shall be repaired or replaced no later than 30 days from discovery. Overhead distribution transformers shall be visually inspected annually as part of the distribution line inspection. Aboveground pad-mounted transformers and below-ground transformers shall be inspected on a 2-year cycle. Reclosers shall be inspected and tested at least once per year.

(4) *Substation inspections.* Substation equipment, structures and hardware shall be inspected monthly.

[Pa.B. Doc. No. 06-1969. Filed for public inspection October 6, 2006, 9:00 a.m.]