

**CHAPTER 5**  
**ELECTRIC SERVICE**

**Authority**

N.J.S.A. 48:2-12, 13, 16, 25, 42 and 52; and 48:3-96.

**Source and Effective Date**

R.2008 d.57, effective February 14, 2008.  
See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

**Chapter Expiration Date**

Chapter 5, Electric Service, expires on February 14, 2013.

**Chapter Historical Note**

Chapter 5, Electric, was filed and became effective prior to September 1, 1969. Subchapter 4, Regulation for Residential Electric Underground Extensions, was adopted as R.1971 d.183, effective December 31, 1971. See: 1 N.J.R. 9(a), 3 N.J.R. 227(c). Subchapter 7, was adopted as R.1973 d.106, effective April 19, 1973. See: 4 N.J.R. 134(c), 5 N.J.R. 167(a). Subsequent revisions to Subchapter 7 were filed and became effective January 21, 1975, as R.1975 d.12. See: 5 N.J.R. 353(a), 7 N.J.R. 62(b). Subchapter 7 was repealed by R.1977 d.37, effective February 17, 1977. See: 9 N.J.R. 139(a).

Pursuant to Executive Order No. 66(1978), Subchapter 3 expired on April 23, 1984.

A new Subchapter 3, Meters, was adopted as R.1985 d.625 effective December 16, 1985. See: 17 N.J.R. 2237(a), 17 N.J.R. 2998(a).

Pursuant to Executive Order No. 66(1978), Chapter 5, Electric, expired on December 16, 1990.

Chapter 5, Electric, was adopted as new rules by R.1991 d.583, effective December 2, 1991. See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Pursuant to Executive Order No. 66(1978), Chapter 5, Electric Service, expired on December 2, 1996.

Chapter 5, Electric Service, was adopted as new rules by R.1997 d.99, effective March 3, 1997. See: 28 N.J.R. 4080(a), 29 N.J.R. 786(b).

Subchapter 7, Interim Electric Distribution Service Reliability and Quality Standards, was adopted as R.2001 d.3, effective January 2, 2001. See: 32 N.J.R. 2980(a), 33 N.J.R. 123(a).

Chapter 5, Electric Service, was readopted as R.2002 d.314, effective August 21, 2002. See: 34 N.J.R. 1390(a), 34 N.J.R. 3234(a).

Subchapter 4, Regulation for Residential Electric Underground Extensions, was repealed and Subchapter 4, Extension of Electric Service, was adopted as new rules by R.2004 d.462, effective December 20, 2004. See: 36 N.J.R. 276(a), 36 N.J.R. 5928(a).

Subchapter 8, Vegetation Management (Tree Trimming) Standards, was adopted as new rules by R.2006 d.434, effective December 18, 2006. See: 37 N.J.R. 4385(a), 38 N.J.R. 5396(a).

Chapter 5, Electric Service, was readopted as R.2008 d.57, effective February 14, 2008. As part of R.2008 d.57, Subchapter 1, Scope and Applicability, was adopted as new rules; former Subchapter 1, Plant, was recodified to Subchapter 2; former Subchapter 2, Service, was recodified to Subchapter 3; former Subchapter 3, Meters, was recodified to Subchapter 4; former Subchapter 4, Extension of Electric Service, was recodified to Subchapter 5; former Subchapter 5, Uniform System of Accounts for Classes A and B Electric Utilities, was recodified to Subchapter 6; former Subchapter 6, Electric Transmission Lines, was recodified to Subchapter 7; former Subchapter 7, Interim Electric Distribution Service Reliability and Quality Standards, was recodified to Subchapter 8 and renamed Electric Distribution Service Reliability and Quality Standards; and former Subchapter 8, Vegetation Management

(Tree Trimming) Standards, was recodified to Subchapter 9 and renamed Vegetation Management, effective March 17, 2008. See: Source and Effective Date. See, also, section annotations.

**CHAPTER TABLE OF CONTENTS**

**SUBCHAPTER 1. SCOPE AND APPLICABILITY**

- 14:5-1.1 Scope
- 14:5-1.2 Definitions
- 14:5-1.3 through 14:5-1.9 (Reserved)

**SUBCHAPTER 2. PLANT**

- 14:5-2.1 Plant construction
- 14:5-2.2 Separation and protection of conductors buried in earth
- 14:5-2.3 Protection at crossing of cables
- 14:5-2.4 Protection of cables installed parallel
- 14:5-2.5 Fault protection
- 14:5-2.6 Identification of conductors
- 14:5-2.7 Ground protection
- 14:5-2.8 Depth of buried cables
- 14:5-2.9 Inspection of property

**SUBCHAPTER 3. SERVICE**

- 14:5-3.1 Polyphase service
- 14:5-3.2 Adequacy of service
- 14:5-3.3 Sealing of main fuse cabinets or circuit breakers
- 14:5-3.4 Grounding of secondaries
- 14:5-3.5 Refusal to connect
- 14:5-3.6 Accidents

**SUBCHAPTER 4. METERS**

- 14:5-4.1 Testing of electric meters
- 14:5-4.2 Periodic testing of electric meters
- 14:5-4.3 Determination of electric meter accuracy
- 14:5-4.4 Outdoor meters
- 14:5-4.5 Readjustment of electric meters

**SUBCHAPTER 5. EXTENSION OF ELECTRIC SERVICE**

- 14:5-5.1 Extensions
- 14:5-5.2 (Reserved)

**SUBCHAPTER 6. UNIFORM SYSTEM OF ACCOUNTS FOR CLASSES A AND B ELECTRIC UTILITIES**

- 14:5-6.1 Adoption by reference of the Uniform System of Accounts
- 14:5-6.2 Adoption by reference of rules concerning preservation of records

**SUBCHAPTER 7. ELECTRIC TRANSMISSION LINES**

- 14:5-7.1 Requirements for electric transmission lines
- 14:5-7.2 through 14:5-7.13 (Reserved)

**SUBCHAPTER 8. ELECTRIC DISTRIBUTION SERVICE RELIABILITY AND QUALITY STANDARDS**

- 14:5-8.1 Purpose and scope
- 14:5-8.2 Reliability performance levels
- 14:5-8.3 Service reliability
- 14:5-8.4 Power quality
- 14:5-8.5 Individual circuit reliability performance
- 14:5-8.6 Inspection and maintenance programs
- 14:5-8.7 Annual System Performance Report
- 14:5-8.8 Major event report
- 14:5-8.9 Establishment of reliability service performance level
- 14:5-8.10 Prompt restoration standards
- 14:5-8.11 Outage management systems (OMS)
- 14:5-8.12 Penalties

## SUBCHAPTER 9. VEGETATION MANAGEMENT

- 14:5-9.1 Purpose and scope
- 14:5-9.2 Definitions
- 14:5-9.3 General provisions
- 14:5-9.4 Maintenance cycle
- 14:5-9.5 Technical standards for vegetation management
- 14:5-9.6 Transmission line vegetation management
- 14:5-9.7 Training, recordkeeping and reporting
- 14:5-9.8 Public notice of planned vegetation management activity
- 14:5-9.9 Outreach programs
- 14:5-9.10 Penalties

$$\text{CAIDI} = \frac{\text{sum of sustained customer interruption durations per reporting period}}{\text{total number of sustained customer interruptions per reporting period}}$$

“Distribution circuit” means a three phase set of conductors emanating from a substation circuit breaker serving customers in a defined local distribution area. This includes three phase, two phase and single phase branches.

“Electric distribution company” or “EDC” means a company that has an electric distribution system and meets the definition of a public utility at N.J.S.A. 48:2-13.

“Electric distribution system” means that portion of an electric system which delivers electric energy from transformation points on the transmission system to points of connection at the customers’ premises.

“IEEE” means a professional association for the advancement of technology, which was originally named the Institute of Electrical and Electronic Engineers. The IEEE is located at 445 Hoes Lane, Piscataway, NJ 08854. Further information can be obtained on the IEEE website at <http://www.ieee.org/portal/site>.

“Interrupting device” means a device capable of being re-closed whose purpose includes interrupting fault currents, isolating faulted components, disconnecting loads and restoring service. These devices can be manual, automatic, or motor operated. Examples include transmission and distribution breakers, line reclosers, motor operated switches, fuses or other devices.

“Interruption” means the loss of electric service to one or more customers. It is the result of one or more component outages, depending on system configuration as well as other events. See “outage” and “major event.” The types of interruption include momentary event, sustained and scheduled.

“Interruption, duration” means the period (measured in minutes, hours, or days) from the initiation of an interruption of electric service to a customer until such service has been restored to that customer. An interruption may require step-restoration tracking to provide reliable index calculations.

“Interruption, momentary event” means an interruption of electric service to one or more customers of duration limited to the period required to restore service by an interrupting device. Such switching operations by interrupting devices must be completed in a specified time not to exceed five minutes. This definition includes all reclosing operations which occur within five minutes of the first interruption. For example, if a recloser or breaker operates two, three, or four times and then holds within five minutes, the event shall be considered one momentary event interruption.

“Interruption, scheduled” means an interruption of electric power service that results when one or more components are deliberately taken out of service at a selected time, usually for

## SUBCHAPTER 1. SCOPE AND APPLICABILITY

## 14:5-1.1 Scope

(a) This chapter shall govern the operation of all electric distribution companies (EDCs) operating within the State of New Jersey.

(b) In addition to complying with this chapter, each EDC described at (a) above shall also comply with the applicable provisions of the Board’s rules for all utilities at N.J.A.C. 14:3.

(c) For the purposes of this chapter, the act of any person, as defined at N.J.A.C. 14:3-1.1, acting on behalf of an EDC, shall be deemed to be the act of the EDC.

New Rule, R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Former N.J.A.C. 14:5-1.1, Plant construction, recodified to N.J.A.C. 14:5-2.1.

## 14:5-1.2 Definitions

For the purposes of this chapter, the following words and terms shall have the following meanings, unless the context clearly indicates otherwise. Additional definitions that apply to this chapter can be found at N.J.A.C. 14:3-1.1.

“Annual System Performance Report” means an annual report containing the information requested in N.J.A.C. 14:5-8.7. This report is to be submitted to the Board by May 31 of each year.

“Benchmark” means the five-year average (2002-2006) of CAIDI and SAIFI or a value determined by the Board.

“Board” means the New Jersey Board of Public Utilities.

“Corrective action” means the maintenance, repair, or replacement of EDC or utility system components and structures to allow them to function with the proper degree of reliability.

“Customer Average Interruption Duration Index (CAIDI)” represents the average time in minutes required to restore service to those customers that experienced sustained interruptions during the reporting period. CAIDI is defined as follows:

5. Statistical tables and charts for EDC reliability performance in its New Jersey service territory and by each operating area;

6. Ten years of trends of CAIDI and SAIFI; and

7. Ten years of trends reflecting the major causes of interruptions.

(c) The Annual Report shall also include a summary of:

1. The EDC's reliability programs, including inspection and maintenance programs;

2. Changes and exceptions to the EDC's current program(s);

3. The EDC's new reliability program(s);

4. The EDC's poor performing circuit program including the methodology used for circuit identification and any appropriate corrective actions;

5. The EDC's power quality program;

6. The EDC's stray voltage program;

7. Technology initiatives to improve reliability;

8. The number of personnel (broken down by bargaining and non-bargaining unit) in each EDC's operating area(s) and a summary statement referencing each EDC's training program; and

9. The vegetation management work and planned activities as required in N.J.A.C. 14:5-9.7.

(d) An officer of the EDC shall certify to the accuracy of the data and analysis in the Annual Report, and that necessary maintenance programs and other actions are being performed and adequately funded and addressed in its business plans to help achieve the benchmark reliability levels and as a minimum to maintain the minimum reliability levels for each operating area.

(e) The Annual Report shall include a summary of each major event.

(f) In the event that an EDC's reliability performance in an operating area does not meet the minimum reliability level for the calendar year, the Annual Report shall include the following:

1. An analysis of the service interruption causes, patterns and trends;

2. A description of the corrective actions taken or to be taken by the EDC and the target dates by which the corrective action shall be completed; and

3. If no corrective actions are planned, an explanation shall be provided.

(g) Each EDC shall include in its Annual Report the greater of four percent or a quantity of five of its worst-

performing circuits identified in each of its operating areas in N.J.A.C. 14:5-8.5(b) based on the reliability performance parameters in N.J.A.C. 14:5-8.5(a) and the corrective actions taken or to be taken. If no corrective actions are planned, an explanation shall be provided.

(h) The Board may require EDCs to submit alternative reports covering a time period other than that covered by the annual report.

Amended by R.2002 d.314, effective September 16, 2002.

See: 34 N.J.R. 1390(a), 34 N.J.R. 3234(a).

In (a), inserted "Annual" preceding "Report shall be limited".

Recodified from N.J.A.C. 14:5-7.8 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Rewrote the section.

Former N.J.A.C. 14:5-8.7, Training, recordkeeping and reporting, recodified to N.J.A.C. 14:5-9.7.

#### 14:5-8.8 Major event report

(a) The EDC shall, within 15 business days after the end of a major event, submit a report to the Board, which shall include the following:

1. The date and time when the EDC's storm or major event center opened and closed;

2. The total number of customers out of service over the course of the major event over four hour intervals, identified by operating area or circuit area. For purposes of this count, the starting time shall be when the storm center opens and the ending time shall be when the storm center closes. Regardless of when the storm center is closed, the EDC shall report the date and time when the last customer affected by a major event is restored;

3. The number of trouble locations and classifications;

4. The time at which the mutual aid and non-company contractor crews were requested, arrived for duty and were released, and the mutual aid and non-contractor response(s) to the request(s) for assistance;

5. A timeline profile of the number of company line crews, mutual aid crews, non-company contractor line and tree crews working on restoration activities during the duration of the major event; and

6. A timeline profile of the number of company crews sent to an affected operating area to assist in the restoration effort.

(b) The EDC shall continue to cooperate with any Board request for information before, during and after a major event.

Recodified from N.J.A.C. 14:5-7.9 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In (a)1, inserted "or major event".

Former N.J.A.C. 14:5-8.8, Public notice of planned vegetation management, recodified to N.J.A.C. 14:5-9.8.

### 14:5-8.9 Establishment of reliability service performance level

(a) For each of an EDC's operating areas, the reliability performance level is established as follows:

1. The operating area's CAIDI benchmark standard is set at the 5-year average CAIDI for the years 2002-2006;
2. The operating area's SAIFI benchmark standard is set at the 5-year average SAIFI for the years 2002-2006;
3. The minimum reliability level for each operating area is attained when its annual CAIDI and SAIFI are no higher than the CAIDI and SAIFI five-year benchmark standard plus 1.5 standard deviations.

(b) When the CAIDI and SAIFI of an EDC or its operating area do not meet the minimum reliability performance level, further review, analysis, and corrective action are required.

(c) The minimum reliability performance level to be assigned to an EDC and/or its operating area shall be reviewed and may be adjusted by Board order for subsequent years after consideration of various factors, including:

1. A comparison of actual multi-year CAIDIs and SAIFIs;
2. Trends among indices;
3. The average high and low values of multi-year indices;
4. Local geography, weather and electric system design of an operating area;
5. The relative performance of an operating area in relation to other operating areas of a given EDC's franchise area;
6. A comparison of the performance of all operating areas of all EDCs; and
7. A comparison of the performance of the EDC to other states or industry statistics.

Amended by R.2001 d.445, effective December 3, 2001.

See: 33 N.J.R. 19(b), 33 N.J.R. 4149(a).

In (a)3, substituted "years 2001 and 2002" for "year 2001".

Recodified from N.J.A.C. 14:5-7.10 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Section was "Establishment of service level values". In (a)1 and (a)2, substituted "5" for "10" and "2002-2006" for "1990-1999"; in (a)3, deleted "for the years 2001 and 2002" following "level", and substituted "CAIDI and SAIFI five" for "10" and "1.5" for "two"; in (b), substituted "EDC or its" for "EDC's" and inserted "performance"; and in (c), inserted "performance" and "by Board order", and substituted "an EDC and/or its" for "each".

Former N.J.A.C. 14:5-8.9, Outreach programs, recodified to N.J.A.C. 14:5-9.9.

### 14:5-8.10 Prompt restoration standards

(a) EDCs shall begin the restoration of service to an affected service area within two hours of notification by two

or more customers or identification by their operating management system of any loss of electric service affecting those customers served electrically by the same affected circuit protective device within the system. Beginning restoration of service shall be defined as the essential or required analysis of the interruption and dispatching an individual or crew to an affected area to begin the restoration process.

(b) The prompt restoration standards shall not apply to EDCs during major events.

(c) When possible, each EDC shall place the highest priority on responding to emergency (safety) situations and high priority on responding to other public facilities for which prompt restoration is essential to the public welfare. These priority requests may come from police, fire, rescue, authorized emergency service providers or public facility operators.

(d) In situations where it is not practicable to respond within two hours to a reported interruption (safety reasons, inaccessibility, multiple simultaneous interruptions, storms or other system emergencies), the EDC shall respond as soon as the situation permits.

Recodified from N.J.A.C. 14:5-7.11 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In (a), inserted "or identification by their operating management system".

Former N.J.A.C. 14:5-8.10, Penalties, recodified to N.J.A.C. 14:5-9.10.

### 14:5-8.11 Outage management systems (OMS)

(a) Each EDC shall maintain an OMS as described in this section.

(b) The OMS shall consist at a minimum of a fully integrated geographic information system (GIS), a sophisticated voice response unit (VRU), a software driven outage assessment tool and an energy management system/supervisory control and data acquisition (EMS/ SCADA).

(c) The OMS shall be able to digitally map the entire electric distribution system, group customers who are out of service to the most probable interrupting device that operated, associate customers with distribution facilities, generate street-map indicating EDC outage locations, improve the management of resources during a storm, improve the accuracy of identifying the number of customers without electric service, accurately communicate the number of customers without electric service and improve the ability to estimate their expected restoration time, accurately communicate the number and when customers were restored and dispatch crews and/or troubleshooters via computer (mobile data terminals).

(d) As part of the outage management system, each EDC shall use appropriate cost benefit analysis for the purpose of adopting smart grid technology to improve reliability. The

implementation of smart grid technology shall be reported in the Annual System Performance Report.

Recodified from N.J.A.C. 14:5-7.13 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In (a), substituted "maintain an" for "substantially implement the" and deleted "by December 31, 2000" from the end; in (c), substituted "The" for "It is intended that when fully implemented the"; and added (d).

#### 14:5-8.12 Penalties

(a) Civil administrative penalties for violations of the reporting and planning and program submission requirements set out in N.J.A.C. 14:5-8.3 through 8.8 and 8.10 shall be assessed as follows:

1. For failure to submit complete required reports, programs and plans on the due date set by rule, the EDC may be liable for a penalty of up to \$5,000 for each day beyond the due date that the report, program or plan is not submitted, up to a maximum of \$25,000 in total penalties for each violation; provided, however, that upon timely written request to Board staff demonstrating the need for an extension of time, the time for submitting required reports, plans and programs may be extended in appropriate cases.

2. A second or any subsequent failure to submit any required report, plan or program, the EDC may be liable for a penalty of up to \$50,000.

(b) Civil administrative penalties for violations of this subchapter other than those set out in (a) above may be assessed as follows:

1. For failure to implement the requirements set out in the programs and plans as submitted to the Board or for the willful misrepresentation of fact and/or intentional inaccuracies in any submitted report, plan or program or for violation of any other requirement of this subchapter, an EDC may be liable for a penalty of not more than \$25,000 for each violation unless mitigating circumstances can be demonstrated by the EDC. For a second or any subsequent violation of the same provision, the EDC may be liable for a penalty of not more than \$50,000.

2. Each violation of any rule of this subchapter shall constitute an additional, separate and distinct violation.

3. Each day during which a violation continues shall constitute an additional, separate and distinct violation.

(c) Any penalty which may be assessed under this section may be compromised by the Board. In determining the amount of the penalty, or the amount agreed upon in compromise, the Board may consider aggravating and mitigating circumstances including the nature and gravity of the violation; the degree of the EDC's culpability; any history of prior violations; and any good faith effort on the part of the EDC in attempting to achieve compliance.

(d) Penalty assessments are payable to the Treasurer, State of New Jersey and are due within 30 days of service upon the EDC of an order assessing a penalty unless the Board directs otherwise.

Recodified from N.J.A.C. 14:5-7.12 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In the introductory paragraph of (a), substituted "planning" for "plan" and updated the N.J.A.C. references.

### SUBCHAPTER 9. VEGETATION MANAGEMENT

#### 14:5-9.1 Purpose and scope

This subchapter sets forth requirements that EDCs shall follow in managing vegetation in proximity to an energized conductor in order to ensure public safety and the efficient and reliable supply of electric power.

Recodified from N.J.A.C. 14:5-8.1 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDCs" for "electric public utilities".

#### 14:5-9.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meaning unless the context clearly indicates otherwise. Additional definitions that apply to this chapter can be found at N.J.A.C. 14:3-1.1:

"Arboriculture" means the cultivation of trees, shrubs and other woody plants.

"Agricultural crop" means a non-woody cash crop, which can be used as a food and is sold for money.

"Border zone" means the space from the edge of the transmission line wire zone, as defined herein, to the outer boundary of the right of way.

"Contractor" means a person or entity, other than the Board, with which a utility contracts to perform work, furnish information and/or material. This term includes all subcontractors engaged by a contractor to perform any of the obligations required by a contract.

"Distribution line" means a primary electric voltage line, wire or cable including supporting structures and appurtenant facilities, which delivers electricity from transformation points on the transmission system to points of connection at a customer's premises, that would not be considered a transmission line as set forth in this section.

"Electric utility arborist" means a person that has been certified as a Utility Specialist by the International Society of Arboriculture and, in addition, meets the following:

1. The person is certified as a Tree Expert by the New Jersey Department of Environmental Protection's Board of Tree Experts; and

2. The person is certified as a Certified Arborist by the International Society of Arboriculture.

"Energized conductor" means an electric circuit or piece of equipment through which electricity is flowing or usually flows. This term includes both distribution and transmission circuits and equipment.

"Grass" means a type of plant with jointed stems, slender flat leaves and spike like flowers.

"Inactive transmission line corridor" means that unused part of the right of way that does not have transmission towers or transmission lines overhead.

"Major event" has the same meaning as is ascribed to this term in N.J.A.C. 14:5-1.2.

"Right of way" means less than fee interest in property, which gives a public utility a limited right to use land owned by another person or entity for the purpose of transmitting or distributing electricity. This right is typically memorialized in an easement. This term also includes the parcel of land for which a public utility holds a right of way or easement.

"Transmission line" means an electrical line, wire or cable, (including the supporting structures) and appurtenant facilities which transmits electricity from a generating plant to electric distribution lines. An electric transmission line usually has a rating exceeding 69 kilovolts.

"Tree" means a tall perennial woody plant with a main trunk and branches forming a distinct elevated crown.

"Vegetation" means trees and other plants.

"Vegetation management" means the removal of vegetation or the prevention of vegetative growth, to maintain safe conditions around energized conductor(s) and ensure reliable electric service. Vegetation management consists of biological, chemical, cultural, manual and mechanical methods to control vegetation in order to prevent hazards caused by the encroachment of vegetation on energized conductor(s), and to provide utility access to the conductor.

"Vegetation manager" or "VM" means an electric utility arborist, who is employed by an EDC to supervise and ensure the EDC's compliance with this subchapter.

"Wire zone" means the land located directly under the widest portion of a transmission line. For a horizontal transmission line, the wire zone is bounded on each side by a location on the ground that is directly under the outermost transmission wire or the transmission tower, whichever is wider. For a vertical transmission array, the wire zone shall be the minimum safe distance specified in the 2007 National Electric Safety Code, §232 to §235, which is incorporated

herein by reference and available at <http://standards.ieee.org/nesc/>, that will allow maintenance on the wires.

"Woody plant" means any vascular plant that has a perennial woody stem and supports continued vegetative growth above ground from year to year and includes trees.

Recodified from N.J.A.C. 14:5-8.2 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In definition "Agricultural crop", inserted "non-woody" and "can be used as a food and" and inserted a comma following "crop"; in definition "Distribution line", inserted a comma following "facilities", and substituted "this section" for "N.J.A.C. 14:5-8.2"; deleted definition "Electric public utility"; in the introductory paragraph of definition "Electric utility arborist", deleted "one or more of" following "meets"; in 1 of definition "Electric utility arborist", substituted "and" for "or"; in definition "Energized conductor", inserted the last sentence; added definitions "Inactive transmission line corridor" and "Vegetation manager"; rewrote definitions "Major event" and "Wire zone"; and re-organized definition "Tree" alphabetically.

### 14:5-9.3 General provisions

(a) An EDC shall ensure that vegetation management is conducted in accordance with this subchapter on any energized conductors of 600 volts and higher, whether for distribution or transmission, that the electric public utility owns, in whole or in part.

(b) Each EDC shall obtain, and shall ensure that its contractors obtain, all required permits and licenses prior to commencement of vegetation management.

(c) An EDC that utilizes chemical or biological agents in vegetation management shall comply with any laws or regulations governing the use of those biological and chemical agents.

(d) Each EDC shall employ a vegetation manager, who is an electric utility arborist, as defined at N.J.A.C. 14:5-9.2. The VM shall be a utility employee, not a contractor. The electric public utility shall provide the VM with the authority and the resources to administer all aspects of the utility's vegetation management program, and the VM shall ensure that the electric public utility complies with this subchapter. The VM's name and contact information shall be posted on the electric utility's web site and shall be included on all notifications provided pursuant to the notice requirements of N.J.A.C. 14:5-9.8.

(e) Each EDC shall ensure that all contractors hired to perform vegetation management inform their workers of all applicable Federal and State laws, rules or regulations that apply to the work performed under this subchapter. The EDC shall also ensure that all contractors comply with each applicable requirement of this subchapter and all other applicable law.

(f) An EDC that performs vegetation management at the request of a municipality or government agency, other than vegetation management required under this subchapter, may require the requesting party to pay any incremental cost

above the EDC's cost to perform the vegetation management required by this subchapter. An EDC shall not perform such additional vegetation management if the additional vegetation management would decrease the reliability or safety of an energized conductor.

(g) Upon a written request from a municipality, an EDC may, but is not required to, temporarily suspend compliance with one or more of the vegetation management requirements of this subchapter, within the following limits:

1. The suspension of compliance shall apply only to the distribution system, and shall not apply to transmission line vegetation management required under N.J.A.C. 14:5-9.6;
2. The suspension of compliance shall apply only to those portions of a distribution system that are located within the municipality, and that do not affect service to any adjacent municipality;
3. The EDC shall not suspend compliance with any requirement if the suspension would result in danger to the public; and
4. If the suspension results in additional costs to the EDC due to lack of tree trimming or other vegetation management, the municipality shall reimburse the electric public utility for these costs.

(h) An EDC may petition the Board for recovery of the distribution and transmission portion of vegetation management program costs required under this subchapter in future base rate proceedings.

(i) Each EDC shall perform vegetation management on a pro rata basis over the four-year cycle identified in N.J.A.C. 14:5-9.4(b) to achieve full compliance by December 18, 2010.

Recodified from N.J.A.C. 14:5-8.3 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDC" for "electric public utility" throughout; in (d), deleted "(VM)" following "vegetation manager" and updated the N.J.A.C. references; in (e), substituted "and State" for ", State; county, and municipal" and substituted the second occurrence of "EDC" for "electric utility"; in (f), inserted "incremental" and substituted "EDC's" for "electric public utility's"; in (g)1, inserted "transmission line" and "required", and substituted "N.J.A.C. 14:5-9.6" for "transmission lines"; in (g)4, inserted "or other vegetation management"; and rewrote (i).

#### 14:5-9.4 Maintenance cycle

(a) An EDC shall perform an annual visual inspection of all energized conductors that are associated with a transmission line, to determine whether vegetation management is needed. The visual inspection may be performed from the ground except in cases where the conductor is not visible from the ground. The EDC shall take into account the height of the vegetation and the distance of the vegetation from the energized conductor, in determining whether vegetation management is needed.

(b) An EDC shall perform vegetation management on vegetation that is close enough to pose a threat to its energized conductors at least once every four years.

(c) In addition to the maintenance required in (b) above, if an EDC becomes aware at any time of any vegetation close enough to its energized conductor to affect reliability or safety prior to the next required vegetation management activity, the electric utility shall ensure that necessary vegetation management is promptly performed as required under N.J.A.C. 14:5-9.5.

(d) If the EDC determines that vegetation described under (c) above poses an immediate safety hazard, the EDC shall not be subject to the notice requirements at N.J.A.C. 14:5-9.8. However, the EDC shall, to the extent practicable, make a reasonable effort to notify the customers and property owners described at N.J.A.C. 14:5-9.8(b)1 and 2 prior to performing the vegetation management.

Recodified from N.J.A.C. 14:5-8.4 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDC" for "electric public utility" throughout; in (a), inserted "that are associated with a transmission line"; rewrote (c); and added (d).

#### 14:5-9.5 Technical standards for vegetation management

(a) Each EDC shall ensure that vegetation management conducted on its energized conductors is performed in accordance with the standards and accepted procedures set forth in the following publications, which are incorporated herein by reference including amendments and supplements thereto:

1. Pruning Trees Near Electric Utility Lines, by Dr. Alex L. Shigo. This publication may be obtained from Shigo and Tree Associates, P.O. Box 769, Durham, New Hampshire 03824;

2. Part 1 of the document entitled Tree, Shrub, and Other Woody Plant Maintenance-Standard Practices. This document, also known as ANSI A300, is published by the American National Standards Institute, and may be obtained at [www.ansi.org](http://www.ansi.org);

3. Best Management Practices, Utility Pruning of Trees, 2004. This title is published by the International Society of Arboriculture and may be obtained at <http://secure.isa-arbor.com/store/Best-Management-Practices-pUtility-Pruning-of-Trees-P23060.aspx>;

4. Environmental Stewardship Strategy for Electric Utility Rights-of-Way, (2002). This title is published by the Edison Electric Institute Vegetation Management Task Force, which may be obtained at [www.eei.org](http://www.eei.org);

5. Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush — Safety Requirements, 1994. This document, also known as ANSI Z133.1, is pub-



lished by the American National Standards Institute, and may be obtained at [www.ansi.org](http://www.ansi.org);

6. Native Trees, Shrubs And Vines For Urban And Rural America: A Planting Design Manual for Environmental Designers, by Hightshoe, G.L., 1987, is published by John Wiley and Sons and may be obtained at <http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471288799.html>;

7. Manual of woody landscape plants 5th Ed., by Michael A. Dirr. Stipes Publishing, LLC; 5th edition (August, 1998), and may be obtained at <http://www.amazon.com/exec/obidos/tg/detail/-/0875637957/103-3217696-1920611?v=glance>;

8. Hortus Third: A concise dictionary of plants cultivated in the United States and Canada, by L.H. Bailey Hortorium, 1976, and may be obtained at <http://www.wiley.com/WileyCDA/WileyTitle/productCd-0025054708.html>; and

9. National Electric Safety Code C2-2007. ISBN: Z2-RES69-07 is published by the Institute of Electrical and Electronics Engineers, Inc and may be purchased at [www.ieee.org](http://www.ieee.org).

(b) Where multiple standards listed at (a) above would apply or conflict, the VM or his or her designee shall select the most appropriate method.

(c) Each EDC shall develop its own vegetation management standards and guidelines, which shall be consistent with this subchapter. In developing these standards and guidelines, a utility shall prioritize work based upon:

1. The extent of the potential for vegetation to interfere with the energized conductor;
2. The voltage of the affected energized conductor; and
3. The relative importance of the affected energized conductor in maintaining safety and reliability.

(d) Each EDC shall provide a copy of its vegetation management standards and guidelines to the Board as a chapter in the Annual System Performance Report. If an EDC makes a change in its vegetation management standards and guidelines, the utility shall provide Board staff with a copy of the change no later than 30 days prior to implementing the change.

(e) Each EDC's vegetation management standards and guidelines shall cover, at a minimum, all of the following activities:

1. Tree pruning and removal;
2. Vegetation control around poles, substations and other energized conductors;
3. Manual, mechanical, or chemical control of vegetation along rights of way;
4. Inspection of vegetation management both before and after the work is performed;

5. Research and development of improved vegetation management activities and practices; and

6. Public education.

(f) Among the factors the EDC shall consider in determining the extent of vegetation management to be performed at a particular site are:

1. The rate at which each species of vegetation is likely to grow back;
2. The voltage of the energized conductor, with higher voltages requiring larger clearances;
3. The potential movement of the energized conductor during various weather conditions;
4. The potential movement of trees or other vegetation during various weather conditions; and
5. The utility's legal rights to access the area.

(g) The EDC shall remove all trimmings and cut vegetation resulting from vegetation management activities that are part of the utility's regular maintenance cycle, within five business days after the vegetation was cut, except if the EDC obtains consent to leave the trimmings or cut vegetation, from the owner of the property upon which the trimmings or cut vegetation are located.

Recodified from N.J.A.C. 14:5-8.5 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDC" for "electric public utility" throughout; in (a)9, substituted "C2-2007" for "C2-2002" and "07" for "02"; in (d), substituted "its" for "their" following "provide a copy of" and "as a chapter in the Annual System Performance Report" for "by January 17, 2007"; in (f), substituted "EDC" for "electric utility"; and rewrote (g).

#### 14:5-9.6 Transmission line vegetation management

(a) In addition to the other requirements of this subchapter, transmission lines, as defined at N.J.A.C. 14:5-9.2, are subject to the requirements in this section.

(b) An EDC shall meet the requirements of the National Electric Safety Code (C2-2007) for minimum clearances between any transmission line and the closest vegetation beneath it.

(c) If a transmission line is upgraded or newly constructed after December 18, 2006, the width of the clearing under the transmission line shall meet the minimum requirements of the National Electrical Safety Code (C2-2007).

(d) An EDC may request an exemption from (b) and (c) above based upon exigent circumstances.

(e) In addition to meeting the other requirements in this section, each EDC shall ensure that the following requirements for transmission lines are met, except for those instances set forth in (f) below:



1. Clearing under transmission lines shall be wide enough within the EDC's right of way so that no vegetation or parts of vegetation will grow or fall into the transmission lines;

2. An EDC shall not allow any vegetation taller than 15 feet at maturity to grow anywhere within a transmission line right of way;

3. The preferred growth in a wire zone shall be grasses or a low-growing, compatible, scrub-shrub plant community to obtain a meadow effect where possible. An EDC shall not allow woody plants that naturally mature above three feet tall to grow in the wire zone;

4. The EDC shall not allow any woody plant species that naturally matures above 15 feet to grow in the border zone. Mature height may be determined from a reliable text authorities either listed in, or equivalent to those listed in N.J.A.C. 14:5-9.5(a). Utilities shall provide this information on their web site or in a publication upon request by a ratepayer;

5. Non-woody agricultural crops, not exceeding 12 feet in height at maturity, may be grown anywhere in the right of way;

6. Only grass vegetation not exceeding a height of 18 inches shall be permitted to grow within three feet of any structure;

7. Where an EDC has cleared a right of way of vegetation and bare soil is exposed, the EDC shall comply with the soil erosion requirements of the applicable soil conservation district in order to prevent soil erosion. A list of the soil conservation districts in New Jersey may be found at [www.state.nj.us/agriculture/divisions/anr/nrc/conservdistricts.html](http://www.state.nj.us/agriculture/divisions/anr/nrc/conservdistricts.html);

8. To the extent that any plant species identified as invasive and non-indigenous to New Jersey poses a threat to the maintenance of the right of way or a hazard to electrical transmission conductors, the EDC shall make reasonable efforts to actively eliminate from the entire right of way the species identified as invasive and non-indigenous, see Snyder, David and Sylvan R. Kaufman, 2004. An overview of non-indigenous plant species in New Jersey. New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of Natural Lands Management, Natural Heritage Program, Trenton, NJ (available at <http://www.nj.gov/dep/parksandforests/natural/heritage/InvasiveReport.pdf>, and incorporated by reference herein, including any supplements and amendments thereto). To do so, the EDC shall use the best integrated vegetation management practices available and practical; and

9. Each year in the March billing cycle, or two months prior to the commencement of vegetation management work on a particular property, whichever is earlier, each EDC shall advise customers of the requirements in this subsection, through a direct notification.

(f) Notwithstanding (e) above, an EDC may leave trees and other woody vegetation within the transmission right of way under any of the following conditions:

1. The right-of-way document, easement, indenture, deed or other written land rights, executed before Jan 1, 2007, expressly permit vegetation to be located within the transmission right of way;

2. The slope of the topography exceeds 30 degrees and the transmission right of way is such that the tree or other vegetation at mature height will allow a space of more than 150 percent of the clearance requirements for an electrical path to ground, as set forth in the National Electric Safety Code, §232 to §235; or

3. Trees are located within an inactive transmission corridor and at mature height will allow a space of more than 150 percent of the clearance requirements for an electrical path to ground set forth in the National Electric Safety Code, §232 to §235.

(g) For the purposes of this section, the mature height of woody and non-woody agricultural crops shall be determined in accordance with the publications listed in N.J.A.C. 14:5-9.5(a), or equivalent publications.

(h) Each year, before June 1, the EDC shall develop a schedule for transmission line vegetation management, which shall be included in the EDC's annual system performance report as required by N.J.A.C. 14:5-8. The schedule shall:

1. List the transmission lines planned for vegetation management for the next four years in advance (one of the four-year cycles required at N.J.A.C. 14:5-9.4(b));

2. Ensure that vegetation management on transmission lines is performed prior to vegetation becoming a threat to safety or service reliability; and

3. Be distributed to affected municipalities by the EDC.

Recodified from N.J.A.C. 14:5-8.6 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDC" for "electric public utility" throughout; in (a), updated the N.J.A.C. reference; in (b) and (c), substituted "(C2-2007)" for "(C-2 2002)"; in the introductory paragraph of (e), inserted ", except for those instances set forth in (f) below"; in (e)1, inserted "within the EDC's right of way"; in (e)2, deleted "that grows" following "vegetation"; rewrote (e)3; in (e)4, updated the N.J.A.C. reference and inserted the last sentence; in (e)7, substituted the second occurrence of "EDC" for "utility" and updated the URL; in (e)8, rewrote the first sentence; in (e)9, substituted "advise customers" for "owners of land upon which the utility holds a right of way" and "direct notification" for "separate direct mailing"; added new (f); recodified the second (e) as (g); recodified former (f) as (h); and in (g), the introductory paragraph of (h) and (h)1, updated the N.J.A.C. references.

#### 14:5-9.7 Training, recordkeeping and reporting

(a) Each EDC shall ensure that:

1. Qualified OSHA and ANSI Z133 line clearance employees or contractors perform vegetation management for the EDC;

2. All such employees or contractors are trained in the proper care of trees and other woody plants in order to provide safe, reliable electric service; and

3. All such employees or contractors are knowledgeable regarding safety practices and line clearance techniques.

(b) Each EDC shall ensure that records are kept of all persons used by a contractor or the EDC to perform vegetation management on behalf of the EDC, including the dates and types of training that each such person has received.

(c) The EDC shall monitor and document all vegetation management and related activities. Documentation shall be retained for five years and shall include, but shall not be limited to:

1. The municipality in which the work was performed;
2. Identification of the circuit and substation where vegetation management activities were performed;
3. The type of vegetation management performed including removal, trimming and spraying and methods used;
4. The crew size and supervisor's name;
5. The date of activity;
6. Any safety hazards encountered;
7. Any unexpected occurrence or accident resulting in death, life-threatening or serious injury to a person assigned to perform vegetation management activities or the public; and
8. Vegetation management activities planned for the following year.

(d) Each EDC shall include a summary of the information required in (c) above about its vegetation management work during the past year, and planned activities for the following year in the Annual System Performance Report to be filed with the Board by May 31 of each year. This information shall include, at a minimum, the name of each municipality in which the EDC conducted vegetation management during the preceding year, and all circuits affected.

Recodified from N.J.A.C. 14:5-8.7 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Substituted "EDC" for "electric public utility" throughout; rewrote (a) and (b); in (c), inserted "be retained for five years and shall"; and in (d), substituted "the Annual System Performance Report" for "an annual report" and "May 31 of" for "May 31st".

#### **14:5-9.8 Public notice of planned vegetation management activity**

(a) Unless specifically stated elsewhere in this subchapter, each EDC shall make a diligent attempt to notify all municipal governments, customers, and property owners that may be affected by planned vegetation management activity on the EDC's distribution or transmission system. This re-

quirement will be satisfied if the EDC provides written notice to customers and property owners in accordance with (b) and (c) below at least seven days, but not more than 45 days, prior to performing any vegetation management activity; and provides notice to municipal governments in accordance with (f) and (g) below.

(b) For distribution circuits, notice shall be provided to the following customers and property owners by separate direct mailing, door hanger, or any other Board-approved method:

1. All customers upon whose property runs any portion of the right of way or easement that will be maintained; and
2. Any owner of a property that meets both of the following:
  - i. The property is not served by the EDC, that is, there is no customer located on the property; and
  - ii. The property includes a portion of the right of way or easement that will be maintained.

(c) For transmission circuits, notice shall be provided through both of the following:

1. The EDC shall notify the persons described at (b)1 and 2 above through a direct mailing by certified mail, return receipt requested, or by another Board-approved method; and
2. The EDC shall publish a notice in two newspapers that serve the area, within the timeframe set forth in (a) above.

(d) For the purposes of (c)1 above, the United States Post Office (USPS) receipt of mailing (usually printed on white paper), which the USPS provides upon the mailing of an item certified mail return receipt requested, shall constitute proof of compliance.

(e) Each EDC shall maintain a record of the dates, locations and activities contained in the notices, which were provided to the municipal government under this section, for a period of five years after notices are sent.

(f) For municipal governments, each EDC shall provide written notice of any pending vegetation management activities to a primary contact. For a municipality, the mayor, town clerk or other person or position mutually agreed upon shall be the primary contact. For other government entities and for public authorities, the primary contact shall be selected by mutual agreement between the EDC and the entity or authority.

(g) An EDC shall notify all municipalities and public authorities that may be affected by vegetation management activities. The notice shall be made in writing to the primary contact designated under (f) above, at least two months in advance of the planned vegetation management. This notice shall include the planned dates and locations of the vegetation

management. In addition, the notice of vegetation management shall be in a manner sufficient to explain each EDC's procedures and easement rights. The EDC shall provide a telephone number of the vegetation manager to enable questions to be answered.

(h) If any notice required under this section is provided by the EDC through a contractor or agent, the notice shall bear the name and logo of the EDC only, and not of the contractor or agent.

Recodified from N.J.A.C. 14:5-8.8 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

Section was "Public notice of planned vegetation management". Substituted "EDC" for "electric public utility" throughout; rewrote (a), added (b) through (d); recodified former (b) through (d) as (e) through (g); rewrote (e); in (f), substituted "For municipal governments, each EDC" for "Each electric public utility or its contractor" and substituted the second occurrence of "EDC" for "electric utility"; in (g), substituted "(f)" for "(c)", "manner sufficient to explain" for "form appropriate to" and "EDC's" for "electric public utility's", and inserted the last sentence; and added (h).

#### 14:5-9.9 Outreach programs

(a) Each EDC shall conduct an annual public education program to inform its customers, as well as the municipalities and public agencies in the EDC's service territory, of the importance of vegetation management, and of the EDC's role and responsibility in managing vegetation near electric lines.

(b) The public education program required under this section shall be implemented by direct mail or another method approved by the Board.

(c) Each EDC shall post its public education materials on its website.

(d) As part of its education program under this section, the EDC shall provide on its website illustrations of typical configurations of transmission lines and easements, as necessary to comply with the requirement in (a) above to inform the public regarding the EDC's responsibilities in performing vegetation management under this subchapter.

Recodified from N.J.A.C. 14:5-8.9 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In (a) and (c), substituted "EDC" for "electric public utility"; in (a), substituted "EDC's" for "electric public utility" twice; and added (d).

#### 14:5-9.10 Penalties

(a) Failure to comply with any provision of this subchapter shall subject the violator to penalties in accordance with the Board's regulatory and statutory authority.

(b) An EDC that violates this subchapter may be subject to penalties of up to \$100.00 per day per violation, for each day the violation occurs. The Board shall notify the EDC of the violation(s) in writing. Upon receipt of the written notice of violation, the EDC shall have five business days to correct the violation(s). Any failure to correct the violation shall subject the EDC to penalties of \$100.00 per day for each violation, calculated from the day such written notice was received by the EDC.

(c) Penalties imposed under this subchapter are in addition to, not a replacement for, other fines and/or penalties that apply under Federal and State laws and regulations.

(d) In determining the appropriate sanction for a violation of this subchapter, the Board shall consider the following criteria, and any other factors deemed appropriate and material to the electric public utility's failure to comply:

1. The good faith efforts, if any, of the entity charged in attempting to achieve compliance;
2. The gravity of the violation or the failure to comply;
3. The number of past violations by the entity charged, including violations of this subchapter as well as of other standards adopted by the Board;
4. The appropriateness of the penalty to the size of the company charged;
5. Events judged to be beyond the violator's control; and
6. Good faith efforts on the part of the EDC to resolve any violations of the requirements contained in this subchapter.

Recodified from N.J.A.C. 14:5-8.10 and amended by R.2008 d.57, effective March 17, 2008.

See: 39 N.J.R. 3716(a), 40 N.J.R. 1684(a).

In (a), deleted the last sentence; in (b), substituted the first and fifth occurrences of "EDC" for "electric public utility", substituted the second, third and fourth occurrences of "EDC" for "utility", and substituted "penalties" for "fines" twice; deleted former (c); recodified former (d) and (e) as (c) and (d); in (c), substituted "Penalties" for "Fines and costs"; in (d)4, substituted "penalty" for "sanction or fine" and deleted "and" from the end; in (d)5, substituted "; and" for a period at the end; and added (d)6.