

CHAPTER 5
ELECTRIC SERVICE

Authority

N.J.S.A. 48:2-12, 48:2-13, 48:3-49 and 48:3-96a.

Source and Effective Date

R.2002 d.314, effective August 21, 2002.
See: 34 N.J.R. 1390(a), 34 N.J.R. 3234(a).

Chapter Expiration Date

In accordance with N.J.S.A. 52:14B-5.1c, Chapter 5, Electric Service, expires on February 17, 2008. See: 39 N.J.R. 3716(a).

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 Subchapter 7 was repealed by R.1977 d.37, effective February 17, 1977.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: Source and Effective Date. See, also, section annotations.

Subchapter 4, Regulation for Residential Electric Underground Extensions, was repealed and Subchapter 4, Extension of Electric Service, was adopted as new rules by R.2004 d.462, effective December 20, 2004.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 TABLE OF CONTENTS

SUBCHAPTER 1. PLANT

- 14:5-1.1 Plant construction
- 14:5-1.2 Separation and protection of conductors buried in earth
- 14:5-1.3 Protection at crossing of cables
- 14:5-1.4 Protection of cables installed parallel

- 14:5-1.5 Fault protection
- 14:5-1.6 Identification of conductors
- 14:5-1.7 Ground protection
- 14:5-1.8 Depth of buried cables
- 14:5-1.9 Inspection of property

SUBCHAPTER 2. SERVICE

- 14:5-2.1 Polyphase service
- 14:5-2.2 Adequacy of service
- 14:5-2.3 Sealing of main fuse cabinets or circuit breakers
- 14:5-2.4 Grounding of secondaries
- 14:5-2.5 Refusal to connect
- 14:5-2.6 Accidents
- 14:5-2.7 (Reserved)

SUBCHAPTER 3. METERS

- 14:5-3.1 Testing of electric meters
- 14:5-3.2 Periodic testing of electric meters
- 14:5-3.3 Determination of electric meter accuracy
- 14:5-3.4 Outdoor meters
- 14:5-3.5 Readjustment of electric meters

SUBCHAPTER 4. EXTENSION OF ELECTRIC SERVICE

- 14:5-4.1 Extensions

SUBCHAPTER 5. UNIFORM SYSTEM OF ACCOUNTS FOR CLASSES A AND B ELECTRIC UTILITIES

- 14:5-5.1 Adoption by reference of the Uniform System of Accounts
- 14:5-5.2 Adoption by reference of rules concerning preservation of records; electric utilities

SUBCHAPTER 6. ELECTRIC TRANSMISSION LINES

- 14:5-6.1 Requirements for electric transmission lines

SUBCHAPTER 7. INTERIM ELECTRIC DISTRIBUTION SERVICE RELIABILITY AND QUALITY STANDARDS

- 14:5-7.1 Purpose and scope
- 14:5-7.2 Definitions
- 14:5-7.3 Reliability performance levels
- 14:5-7.4 Service reliability
- 14:5-7.5 Power quality
- 14:5-7.6 Individual circuit reliability performance
- 14:5-7.7 Inspection and maintenance programs
- 14:5-7.8 Annual System Performance Report
- 14:5-7.9 Major event report
- 14:5-7.10 Establishment of service level values
- 14:5-7.11 Prompt restoration standards
- 14:5-7.12 Penalties
- 14:5-7.13 Outage management systems (OMS)

SUBCHAPTER 8. VEGETATION MANAGEMENT (TREE TRIMMING) STANDARDS

- 14:5-8.1 Purpose and scope
- 14:5-8.2 Definitions
- 14:5-8.3 General provisions
- 14:5-8.4 Maintenance cycle
- 14:5-8.5 Technical standards for vegetation management
- 14:5-8.6 Transmission line vegetation management
- 14:5-8.7 Training, recordkeeping and reporting
- 14:5-8.8 Public notice of planned vegetation management
- 14:5-8.9 Outreach programs
- 14:5-8.10 Penalties

SUBCHAPTER 1. PLANT

14:5-1.1 Plant construction

The construction and installation of plant and facilities of electric utilities must be in accordance with N.J.A.C. 14:3-2.1 and, except with respect to the protection and separation of conductors buried in earth, must be in accordance with the applicable requirements of the National Electrical Code and the National Electrical Safety Code in effect at the time of construction. When and if any controversy arises as to the necessity for adopting specifications calling for construction of a higher standard, the matter may be referred to the Board for determination.

Case Notes

Electric utility practiced prudent field management in choosing site for proposed distribution substation. Matter of Appeal of Atlantic City Elec. Co., 93 N.J.A.R.2d (BRC) 75.

14:5-1.2 Separation and protection of conductors buried in earth

(a) The separation between buried communication and buried supply conductors or cables shall consist of not less than 12 inches of well-tamped earth, four inches of brick or three inches of concrete.

(b) Exceptions to (a) above are as follows:

1. This separation and protection is not required where supply circuits having a potential of 550 volts or less between conductors and having a total transmitted power of not in excess of 3,200 watts are laid adjacent to communication cables, if all cables are used exclusively for the operation of a railway signal or supply system and are maintained by the same company.

2. This separation and protection is not required where supply circuits have a potential of 550 volts or less between conductors.

3. This separation and protection is not required where communication and power supply conductors or cables which have a potential of over 550 volts between conductors are buried in a common trench at the same depth with random separation under the following conditions:

i. The electric system shall be wye connected with grounded neutral and a voltage not exceeding 22,000 volts to ground;

ii. The power cables shall have a concentric solidly grounded neutral. When there is no covering over the concentric neutral, grounding may be by direct burial in earth; otherwise ground rods shall be driven at all cable terminations or a separate bare copper grounding conductor not smaller than # 4A.W.G. shall be buried in the earth not more than three inches from the power cable. All neutral and grounding conductors shall be interconnected at all power cable terminations. The power cables

shall meet or exceed the test requirements of the Insulated Power Cable Engineers Association—National Electrical Manufacturers Association standards for cables for transmission and distribution of electrical energy;

iii. The communication cable shall contain a metallic sheath bonded to the electric system grounded neutral at intervals of not more than 1,000 feet.

4. No separation is required between communication and supply conductors or cables located beneath transformer switch and terminal cabinets or their supporting pads or structures.

As amended, R.1975 d.215, effective July 28, 1975.

See: 7 N.J.R. 277(a), 7 N.J.R. 437(a).

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

Cross References

Fault protection of buried cables, see N.J.A.C. 14:5-1.5.

14:5-1.3 Protection at crossing of cables

(a) At all crossings where buried supply conductors or cables are above communication conductors or cables, the supply conductors or cables shall be protected from digging operations by concrete or creosoted wood plank or equivalent mechanical protective covering extending at least two feet in each direction from the point of crossing.

(b) Exceptions to (a) above are as follows:

1. This separation and protection is not required where supply circuits having a potential of 550 volts or less between conductors and having a total transmitted power of not in excess of 3,200 watts are laid adjacent to communication cables, if all cables are used exclusively for the operation of a railway signal or supply system and are maintained by the same company.

2. This protection is not required where supply conductors over 550 volts between conductors are installed in accordance with N.J.A.C. 14:5-1.2(b) 3 and 4.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

Amended by R.1997 d.99, effective March 3, 1997.

See: 28 N.J.R. 4080(a), 29 N.J.R. 786(b).

Changed N.J.A.C. references.

14:5-1.4 Protection of cables installed parallel

(a) Where buried communication and buried supply conductors or cables are installed in the same trench generally parallel to each other, the buried supply conductors or cables shall be covered with concrete or creosoted wood planking or equivalent mechanical protection, except that this covering may be omitted in the following cases:

1. Where the voltage of the supply conductors does not exceed 550 volts between conductors;
2. Where the supply conductors or cables are encased in a continuous metallic sheath effectively grounded;
3. Where the supply conductors or cables are installed more than two feet horizontally from communication conductors;
4. Where supply conductors over 550 volts between conductors are installed in accordance with N.J.A.C. 14:5-1.2(b)3.

(b) This separation and protection is not required where supply circuits having a potential of 550 volts or less between conductors and having a total transmitted power of not in excess of 3,200 watts are laid adjacent to communication cables, if all cables are used exclusively for the operation of a railway signal or supply system and are maintained by the same company.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

14:5-1.5 Fault protection

Where buried communication and power supply conductors of 550 volts or more between conductors are installed in the same trench without separation and in accordance with the requirements of N.J.A.C. 14:5-1.2, the cable shall be protected by devices capable of clearing phase to ground faults.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

14:5-1.6 Identification of conductors

Each company using a random burial method of the underground system shall properly identify their cable, and employees of a company shall know the identification of the cable belonging to their company.

14:5-1.7 Ground protection

(a) Where communication and power supply conductors are buried in the same trench without separation, the following ground protection shall be provided:

1. At each transformer and/or pedestal installation all grounds, sheaths and neutrals shall be interconnected. The common neutral conductor shall normally be continuous. Where straight splices are required in the common neutral, only two ends of the conductors shall be joined with one conductor. All interconnections, including equipment neutral connections, to the common neutral required by N.J.A.C. 14:5-1.2 through 1.8 shall be made by taps to the common neutral.

2. Telephone protectors, communication service cable shields and secondary neutrals shall be connected to a common ground at each customer's service entrance when communication circuits are underground without separation from power conductors.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

14:5-1.8 Depth of buried cables

Where communication and power supply cables of over 550 volts between conductors are buried without separation in the same trench or without mechanical protection, the power

cable shall be buried to a minimum of 30 inches of cover except under railroad tracks where they shall be buried with a minimum cover of 42 inches. In rock, 24-inch minimum cover will be acceptable or a lesser cover will be accepted where an adequate means of mechanical protection is provided.

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

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

14:5-1.9 Inspection of property

Each electric utility shall inspect lamps and street lighting accessories and maintain such service in accordance with established practice. Whenever any transformers, high tension insulators, and equipment are removed from the system for any reason they shall be inspected as to safety and serviceability before being reinstalled in the same or other location.

SUBCHAPTER 2. SERVICE

14:5-2.1 Polyphase service

Where polyphase service is available, or can be made available in accordance with the rules and regulations in the utility's tariff, an applicant for polyphase service for a motor installation shall be supplied polyphase service where any one motor is over ten horsepower, or where any one motor is between five horsepower and ten horsepower and the supply of such motor with single phase service is likely to have an objectionable effect on the service to the applicant or upon other customers.

Recodified from N.J.A.C. 14:5-2.2 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.1, Service connections; electric, repealed.

14:5-2.2 Adequacy of service

(a) Electric utilities supplying electrical energy on a constant potential system shall adopt and maintain a standard average value of voltage as measured at the point of attachment to the customer's wiring; and the normal variations, as measured by a standardized voltmeter, shall not vary for periods exceeding five minutes for service supplied at 150 volts or less to ground more than four percent above, nor more than four percent below said standard average voltage for said location which is in force at the time; provided, however, the variations in voltage caused by the operation of apparatus in the customer's premises in violation of the utility's rules, the action of the elements, or other causes beyond the utility's control shall not be considered a violation of this provision.

(b) Each electric utility supplying alternating current shall adopt a standard frequency, the suitability of which may be determined by the Board, and shall maintain this frequency; provided, however, that changes or variations of frequency

which are clearly due to no lack of proper equipment or reasonable care on the part of the utility shall not be considered a violation of this rule.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

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

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

Recodified from N.J.A.C. 14:5-2.3 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.2, Polyphase service, recodified to N.J.A.C. 14:5-2.1.

14:5-2.3 Sealing of main fuse cabinets or circuit breakers

In the interest of safety to the electric utility customer and as a measure of protection to the utility, main service cabinets or cabinets enclosing main fuses and circuits may be sealed; provided, however, that the main switches or circuit breakers in such cabinets are externally operable; that service entrance wires are installed in accordance with the National Electrical Code; and that fuses or circuit breakers other than above mentioned are made accessible to the customer. The utility's service department should be so organized and directed that its customers may be assured prompt restoration of service when interrupted through failure of main fuses or opening of the circuit breakers which are sealed.

Recodified from N.J.A.C. 14:5-2.4 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.3, Adequacy of service, recodified to N.J.A.C. 14:5-2.2.

14:5-2.4 Grounding of secondaries

Secondaries shall be grounded by electric utilities in a manner which accords with the applicable provisions of the National Electrical Safety Code.

Recodified from N.J.A.C. 14:5-2.5 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.4, Sealing of main fuse cabinets or circuit breakers, recodified to N.J.A.C. 14:5-2.3.

14:5-2.5 Refusal to connect

An electric utility may refuse to connect with any customer's installation when it is not in accordance with the National Electrical Code and with standard terms and conditions of the utility furnishing the service, and where a certificate approving the customer's electrical installation has not been issued by a county or a municipality or by some person, agency or organization duly appointed by the county or municipality to make such inspections. When a county or municipality has not provided, in accordance with applicable statutes, for the regulation and inspection of wires and appliances for the utilization of electrical energy, or has not appointed any person, agency or organization to make such inspections, then an inspection certificate, issued by an

inspection agency designated by the electric utility in its filed tariff, shall be accepted in lieu thereof.

Recodified from N.J.A.C. 14:5-2.6 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.5, Grounding of secondaries, recodified to N.J.A.C. 14:5-2.4.

14:5-2.6 Accidents

Each electric utility shall report accidents in conformance with the provisions of N.J.A.C. 14:3-6.4.

New Rule, R.2002 d.314, effective September 16, 2002.

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

Recodified from N.J.A.C. 14:5-2.7 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Former N.J.A.C. 14:5-2.6, Refusal to connect, recodified to N.J.A.C. 14:5-2.5.

14:5-2.7 (Reserved)

Recodified to N.J.A.C. 14:5-2.6 by R.2005 d.377, effective November 7, 2005.

See: 37 N.J.R. 1401(a), 37 N.J.R. 4292(a).

Section was "Accidents".

SUBCHAPTER 3. METERS

14:5-3.1 Testing of electric meters

(a) Each utility furnishing electric service shall provide and have available a meter testing laboratory, standard meters and instruments, and such other equipment and facilities as may be necessary to make the tests required by these regulations, or by other orders of the Board.

(b) Each utility furnishing electric service shall provide and have available such portable indicating electrical testing instruments and portable watt-hour meters of suitable range and type for testing service watt-hour meters, switchboard instruments, recording voltmeters and other electrical instruments in use as may be deemed necessary by the Board.

(c) For testing the accuracy of the portable watt-hour meters, commonly known as "rotating standards," and the portable instruments used for testing customer's service meters, each utility shall provide and have available suitable indicating electrical instruments, watt-meters, watt-hour meters, or any or all of them hereinafter called "reference standards". Such standards may be of the service type of watt-hour meters, but, if so, such watt-hour meters shall be permanently mounted in the meter laboratory of the utility and shall be used for no other purpose than for checking standards. All reference standards may be tested, adjusted and sealed by the Board at its discretion.

(d) All portable watt-hour meters (rotating standards) of the commutator type shall be compared with reference standards at least once each week. Every portable watt-hour meter (rotating standard) shall at all times be accompanied by a certificate giving the date when it was certified, the corrections to be applied at various loads, and signed by the proper authority. These certificates, when superseded, shall be kept on file in the office of the utility at least one year.

(e) All portable, indicating electrical testing instruments, such as, voltmeters, ammeters and watt-meters, when in regular use for testing purposes, shall be checked against reference standards at least once a week when continuing in use.

(f) Instruments and standards may be tested and certified by any standardizing laboratory whose instruments and methods are approved by the Board.

14:5-3.2 Periodic testing of electric meters

(a) All direct current meters installed upon customers' premises shall be periodically tested in accordance with the following schedule:

1. Up to and including six kilowatts—at least once in 3½ years;
2. Over six kilowatts, up to and including 100 kilowatts—at least once in 1½ years;
3. Over 100 kilowatts—at least once in one year.

(b) The kilowatt rating of a direct current meter is the product of the rated voltage and the rated current.

(c) All types of alternating current watt-hour meters installed upon customers' premises shall be tested as follows:

1. Self-contained polyphase meters and transformer rated meters:
 - i. Meters without demand register—at least once in 16 years;
 - ii. Meters with block-interval demand registers—at least once in 12 years;
 - iii. Meters with lagged demand registers—at least once in eight years.
2. Self-contained single-phase meters and three-wire network meters—at least once in eight years or by a variable interval or statistical sampling technique approved by the Board.

As amended R.1979 d.374, effective September 5, 1979.
See: 11 N.J.R. 402(c), 11 N.J.R. 585(c).
Amended by R.1991 d.583, effective December 2, 1991.
See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).
Editorial or stylistic change only.

14:5-3.3 Determination of electric meter accuracy

(a) No meter that has an error in registration of more than plus or minus two percent shall be placed in service or allowed to remain in service without adjustment.

(b) No meter which registers upon "no load" shall be placed in service or allowed to remain in service. To determine that a meter is registering upon "no load", all load wires shall be removed, and if the meter disk then rotates at the rate of one revolution in five minutes or less it shall be considered as registering on "no load".

(c) For periodic testing, the accuracy shall be determined by taking the average of the percentage registration at light load and heavy load. In periodic testing where the average accuracy shows the meter to be in error by more than two percent, the complaint testing method as stated below shall be used to determine the final accuracy of the meter.

(d) As used in this section, light load shall be approximately five to ten percent of rated current and heavy load shall be not less than 60 percent nor more than 150 percent of rated current.

(e) For complaint testing, the accuracy shall be determined by taking the average of the percentage registration at light load and at heavy load, giving the heavy load registration a weight of four.

Case Notes

Minor error in electric meter readings did not exceed permissible margin of error. *Gross v. PSE&G*, 96 N.J.A.R.2d (BRC) 13.

Utility correctly billed customer for unmetered electrical service over a span of 11 years. *Licciardello v. Public Service Electric and Gas*, 95 N.J.A.R.2d (BRC) 35.

14:5-3.4 Outdoor meters

All new electric meters installed outdoors shall be compensated for temperature variations.

14:5-3.5 Readjustment of electric meters

Each meter after being tested shall be adjusted to record within a tolerance of plus 0.3 percent and minus one percent at both light and heavy loads. These tolerances are specified to allow for necessary variations and meters must be adjusted to within the allowable tolerances as nearly as practicable to zero error. Meters removed from service are to be tested and adjusted in the meter room before being put in service again. Each electric meter shall be tested for accuracy before installation or within 30 days after being set.

SUBCHAPTER 4. EXTENSION OF ELECTRIC SERVICE

14:5-4.1 Extensions

All extensions of electric service, including service connections, shall be governed by the provisions for extensions set forth at N.J.A.C. 14:3-8.

Administrative correction.
See: 38 N.J.R. 1225(a).

**SUBCHAPTER 5. UNIFORM SYSTEM OF ACCOUNTS
FOR CLASSES A AND B ELECTRIC UTILITIES**

**14:5-5.1 Adoption by reference of the Uniform System
of Accounts**

The Board adopts by reference the Uniform System of Accounts for Classes A and B Electric Utilities that have been promulgated by the Federal Energy Regulatory Commission

as well as all present and subsequent amendments, revisions, deletions and corrections which the Federal Energy Regulatory Commission may adopt insofar as they relate to electric utilities subject to the jurisdiction of the Board and are in accordance with the Board's policies and procedures.

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

14:5-5.2 Adoption by reference of rules concerning preservation of records; electric utilities

(a) On September 14, 1972, the then Board of Public Utility Commissioners in the Department of Public Utilities, pursuant to authority of N.J.S.A. 48:2-1 et seq. and in accordance with applicable provisions of the Administrative Procedure Act of 1968, adopted by reference the "Regulations to Govern the Preservation of Records of Electric, Gas and Water Utilities" originally proposed to various states for adoption by the National Association of Regulatory Utility Commissioners as promulgated and published in April, 1972, for use by the electric, gas and water utilities.

(b) The Board of Public Utilities adopts these rules, as well as any modifications or changes that the National Association of Regulatory Utility Commissioners may make thereto, as its modified rules governing the preservation and destruction of records for all classes of electric, gas and water utilities subject to its jurisdiction and as a supplement to its uniform system of accounts for all classes of electric, gas and water utilities.

(c) Copies of the full text of these rules are available for examination in the Board's offices in Two Gateway Center, Newark, New Jersey 07102. Copies of these rules may be purchased from the National Association of Regulatory Utility Commissioners, 1101 Vermont Avenue, NW, Washington, D.C. 20005.

R.1972 d.181, effective September 18, 1972.

See: 4 N.J.R. 241(b).

Public Notice: Change of address.

See: 19 N.J.R. 890(a).

Amended by R.1991 d.583, effective December 2, 1991.

See: 23 N.J.R. 1519(a), 23 N.J.R. 3652(a).

Editorial or stylistic change only.

Amended by R.1997 d.99, effective March 3, 1997.

See: 28 N.J.R. 4080(a), 29 N.J.R. 786(b).

Changed name of Board and added reference to modifications to the rules.

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

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

Rewrote (c).

much as possible and to the extent consistent with the need for protection.

(b) An entity that conducts vegetation management under an overhead transmission line shall comply with the standards for vegetation management set forth in N.J.A.C. 14:5-8.

R.1972 d.236, effective November 28, 1972.

See: 4 N.J.R. 224(b), 5 N.J.R. 19(a).

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)3, inserted "and to the extent consistent with the need for protection" following "possible".

Amended by R.2006 d.434, effective December 18, 2006.

See: 37 N.J.R. 4385(a), 38 N.J.R. 5396(a).

In (a)2, inserted "and" at the end; in (a)3, substituted a period for a semicolon at the end; deleted (a)4 through (a)7; and added (b).

Case Notes

Action to enjoin tree removal on easement by utility within jurisdiction of Board of Public Utilities for Resolution as a contested case. *Boss v. Rockland Electric Co.*, 95 N.J. 33, 468 A.2d 1055 (1983).

Homeowner failed to prove that electromagnetic field allegedly created by nearby power lines posed health risk. *Karvounis v. Atlantic Electric*, 96 N.J.A.R.2d (BRC) 42.

Public utility, after showing that distribution supply lines are necessary for service, convenience, or welfare of public, need not comply with township's zoning and land use ordinances. In the Matter of the Petition of the Atlantic City Electric Company, 96 N.J.A.R.2d (BRC) 6.

Electric utility did not improperly trim blue spruce tree on property owners' land. *Orlandi v. Jersey Central Power and Light Co.*, 93 N.J.A.R.2d (BRC) 134.

SUBCHAPTER 7. INTERIM ELECTRIC DISTRIBUTION SERVICE RELIABILITY AND QUALITY STANDARDS

14:5-7.1 Purpose and scope

(a) The rules in this subchapter set forth requirements based on a uniform methodology for measuring reliability and ensuring quality of the electric distribution service that is being delivered to New Jersey customers by the electric distribution companies (EDCs) operating in New Jersey subject to the Board's regulatory authority.

(b) These rules, which include requirements for data maintenance, records retention and service interruption information, establish standards to measure the reliability of service on an annual and as needed basis under all operating conditions except major events. Major events shall be examined on a case-by-case basis to determine whether or not the EDC's preparation and response were adequate. It is the general obligation of a regulated EDC to provide sufficient resources in order to provide safe, adequate and proper service to its customers. The Board may also consider other factors in determining whether or not an EDC has provided adequate service.

SUBCHAPTER 6. ELECTRIC TRANSMISSION LINES

14:5-6.1 Requirements for electric transmission lines

(a) Whenever an electric company constructs an overhead transmission line, it shall:

1. Make use of available railroad or other rights-of-way whenever practicable, feasible and with safety, subject to agreement with the owners;
2. Locate towers whenever practicable and feasible in accordance with the topography so as to minimize their appearance; and
3. Establish a program of painting towers initially and periodically in order to camouflage their appearance as

(c) EDCs are encouraged to explore the use of proven state of the art technology and to promote distribution reliability service improvements.

(d) The rules in this subchapter also set forth requirements for the implementation and scope of outage management systems.

14:5-7.2 Definitions

The following words and terms, as used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

“Benchmark” means the 10-year average (1990-1999) of CAIDI and SAIFI or a value determined by the Board.

“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:

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

“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.

“EDC” means electric distribution company.

“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.

“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 that results when one or more components are deliberately taken out of service at a selected time, usually for the purposes of preventative maintenance, repair or construction.

1. This interruption derives from transmission and distribution applications and does not apply to generation interruptions.

2. The key test to determine if the loss of electric service should be classified as a scheduled interruption is as follows: If it is possible to defer the interruption when such deferment is desirable, the interruption is a scheduled interruption. Deferring an interruption may be desirable, for example, to prevent overload of facilities or interruption of service to customers. Scheduled interruptions shall not be included in the CAIDI and SAIFI calculations.

“Interruption, sustained” means an interruption of electric service to one or more customers that is not classified as a momentary event interruption and which is longer than five minutes in duration.

“Interrupting device” means a device capable of being reclosed 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.

“Major event” means any of the following:

1. A sustained interruption of electric service resulting from conditions beyond the control of the EDC, which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area. Due to an EDC’s documentable need to allocate field resources to restore service to affected areas(s) when one operating area experiences a major event, the major event shall be deemed to extend to those other operating areas of that EDC which are providing assistance to the affected area(s). The Board retains authority to examine the characterization of a major event;
2. An unscheduled interruption of electric service resulting from an action:
 - i. Taken by an EDC under the direction of an Independent System Operator;
 - ii. Taken by the EDC to prevent an uncontrolled or cascading interruption of electric service; or
 - iii. Taken by the EDC to maintain the adequacy and security of the electric system, including emergency load control, emergency switching and energy conservation procedures, which affects one or more customers;
3. A sustained interruption occurring during an event which is outside the control of the EDC and is of sufficient intensity to give rise to a state of emergency or disaster being declared by State government; and
4. When mutual aid is provided to another EDC or utility, the assisting EDC may apply to the Board for permission to exclude its sustained interruptions from its CAIDI and SAIFI calculations.

Interruptions occurring during a major event in one or more operating areas shall not be included in the EDC’s CAIDI and SAIFI calculations of those affected operating area(s). However, interruption data for major events shall be collected, according to the reporting requirements outlined in N.J.A.C. 14:5-7.9.

“Minimum reliability level” is defined as the minimum acceptable reliability as measured by CAIDI and SAIFI data

as specified in N.J.A.C. 14:5-7.10. Performance equal to or better than the minimum reliability level is acceptable. Performance worse than the minimum reliability level is unacceptable and may be subject to penalty.

“Operating area” means a geographical subdivision of each EDC’s franchise territory as defined by the EDC. These areas may also be referred to as regions, divisions or districts.

“Outage” means the state of a component when it is not available to perform its intended function due to some event directly associated with that component.

1. An outage may or may not cause an interruption of electric service to customers, depending on system configuration.
2. This definition derives from transmission and distribution applications and does not apply to generation outages.

“Power quality” means the characteristics of electric power received by the customer, with the exception of sustained interruptions and momentary event interruptions. Characteristics of electric power that detract from its quality include waveform irregularities and voltage variations—either prolonged or transient. Power quality problems shall include, but are not limited to, disturbances such as high or low voltage, voltage spikes or transients, flickers and voltage sags, surges and short-time overvoltages, as well as harmonics and noise.

“Reliability” means the degree to which safe, proper and adequate electric service is supplied to customers without interruption.

“Step restoration” means the restoration of service to blocks of customers in an area until the entire area or circuit is restored.

“System Average Interruption Frequency Index” (SAIFI) represents the average frequency of sustained interruptions per customer during the reporting period. SAIFI is defined as:

$$\text{SAIFI} = \frac{\text{total number of sustained customers interruptions per reporting period}}{\text{total number of customers served per reporting period}}$$

“Total number of customers served” means the number of active metered accounts as of the last day of the prior year or the average of 12 months of active monthly metered accounts. This number generally excludes all street lighting (dusk-to-dawn lighting, municipal street lighting, traffic lights) and sales to other electric utilities.

Amended by R.2002 d.314, effective September 16, 2002.
See: 34 N.J.R. 1390(a), 34 N.J.R. 3234(a).

In “Major event”, substituted “Board” for “BPU” in 4.

14:5-7.3 Reliability performance levels

(a) Each EDC shall take reasonable measures to perform better than the minimum reliability levels.

(b) The SAIFI and CAIDI for each EDC's respective operating areas shall be calculated at the end of each calendar year or any reporting period established by the Board.

14:5-7.4 Service reliability

(a) Each EDC shall have reasonable programs and procedures necessary to maintain the minimum reliability levels for its respective operating areas.

(b) The programs shall be designed to sustain reliability and, where appropriate, improve reliability. Each EDC shall utilize appropriate and qualified resources to maintain as a minimum the minimum reliability levels for its respective operating areas.

(c) Interruptions shall not be reduced by unduly characterizing a sustained interruption as a series of momentary event interruptions. Electric service interruptions shall be reported to Board staff in accordance with N.J.A.C. 14:3-3.9.

14:5-7.5 Power quality

(a) Each EDC shall consider power quality in the design and maintenance of its distribution power-delivery system components. Each EDC shall strive to avoid and to mitigate, to the extent feasible and cost effective, power quality disturbances under its control that adversely affect customers' properly designed equipment.

(b) Each EDC shall, as a minimum, maintain a power quality program that includes its objectives and procedures. The program shall be designed to respond promptly to customer reports of power quality problems. The program shall strive to prevent, mitigate or resolve power quality problems within the EDC's control to the extent cost-effective and practical.

(c) The EDC's power quality program shall be filed with the Board by January 31, 2001.

14:5-7.6 Individual circuit reliability performance

(a) Upon request of the Board, each EDC shall be able to identify reliability performance on a basis predefined by the EDC for any circuit on its system.

(b) Each EDC shall identify and analyze poor performing circuit(s) as identified by the reliability performance parameters of item (a) and take appropriate actions to improve reliability performance.

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), substituted "Board" for "BPU".

14:5-7.7 Inspection and maintenance programs

(a) In accordance with N.J.A.C. 14:3-2.6 and 2.7, each EDC shall have inspection and maintenance programs for its distribution facilities, as appropriate to furnish safe, proper and adequate service. These programs shall be based on factors such as applicable industry codes, national electric industry practices, manufacturer's recommendations, sound engineering judgment and past experience. A significant portion of these inspection and maintenance programs shall be focused on mitigating those interruption causes with the greatest impact on reliability such as those related to equipment, vegetation, and animals. EDCs shall endeavor to utilize tree trimming, physical plant inspections, maintenance and protective measures and equipment to assist in the prevention and management of interruptions when appropriate.

(b) Each EDC shall submit to the Board, no later than January 31, 2001, compliance plans for the inspections, maintenance and recordkeeping required in this subchapter. These compliance plans shall include individual programs aimed at reducing specific outage causes.

(c) Each EDC shall maintain records of inspection and maintenance activities. These records shall be made available to Board Staff, who shall be permitted to inspect such records at any reasonable time.

14:5-7.8 Annual System Performance Report

(a) Each EDC shall submit to the Board, on May 31, 2001, May 31, 2002 and September 1, 2002, an Annual System Performance Report (the "Annual Report"); provided, however, that the September 1, 2002 Annual Report shall be limited to CAIDI and SAIFI performance data for the period January 1, 2002 to June 30, 2002.

(b) The Annual Report shall include the electric service reliability performance for the EDC's predefined operating areas in relation to their benchmark and minimum reliability levels of SAIFI and CAIDI. The report submitted in May 2001 shall cover the calendar year 2000, the report submitted in May 2002 shall cover the calendar year 2001 and the report submitted in September 2002 shall cover the period of January 1 through June 30, 2002.

(c) The Annual Report shall 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. Technology initiatives to improve reliability;

7. 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

8. Certification by an officer of the EDC of the data and analysis and that necessary maintenance programs and other actions are being performed and adequately funded by the Company 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.

(d) The Annual Report shall also include statistical tables and charts as follows for EDC reliability performance State-wide and by each operating area:

1. Ten years of trends of CAIDI and SAIFI; and
2. Ten years of trends of major causes of interruptions.

(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 two percent or a quantity of five of its worst-performing circuits identified in each of its operating areas in N.J.A.C. 14:5-7.6(b) based on the reliability performance parameters in N.J.A.C. 14:5-7.6(a) and the corrective actions taken or to be taken. If no corrective actions are planned, an explanation shall be provided.

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".

14:5-7.9 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 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.

14:5-7.10 Establishment of service level values

(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 10-year average CAIDI for the years 1990-1999;
2. The operating area's SAIFI benchmark standard is set at the 10-year average SAIFI for the years 1990-1999; and
3. The minimum reliability level for the years 2001 and 2002 for each operating area is attained when its annual CAIDI and SAIFI are no higher than the 10-year benchmark standard plus two standard deviations.

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

(c) The minimum reliability level to be assigned to each operating area shall be reviewed and may be adjusted 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".

14:5-7.11 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 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.

14:5-7.12 Penalties

(a) Civil administrative penalties for violations of the reporting and plan and program submission requirements set out in N.J.A.C. 14:5-7.4 through 7.9 and 7.11 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.

14:5-7.13 Outage management systems (OMS)

(a) Each EDC shall substantially implement the OMS as described in this section by December 31, 2000.

(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) It is intended that when fully implemented 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).

SUBCHAPTER 8. VEGETATION MANAGEMENT (TREE TRIMMING) STANDARDS

14:5-8.1 Purpose and scope

This subchapter sets forth requirements that electric public utilities 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.

14:5-8.2 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 cash crop which 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 N.J.A.C. 14:5-8.2.

“Electric public utility” means a public utility, as that term is defined in N.J.S.A. 48:2-13, that transmits and distributes electricity to end users within New Jersey.

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

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

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

“Major event” means any of the following:

1. A sustained interruption of electric service resulting from conditions beyond the control of the electric distribution company (EDC), which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area. Due to an EDC’s documentable need to allocate field resources to restore service to affected areas(s) when one operating area experiences a major event, the major event shall be deemed to extend to those other operating areas of that EDC which are providing assistance to the affected area(s). The Board retains authority to examine the characterization of a major event;

2. An unscheduled interruption of electric service resulting from an action:

- i. Taken by an EDC under the direction of an independent system operator;
- ii. Taken by the EDC to prevent an uncontrolled or cascading interruption of electric service; or
- iii. Taken by the EDC to maintain the adequacy and security of the electric system, including emergency load control, emergency switching and energy conservation procedures, which affects one or more customers;

3. A sustained interruption occurring during an event which is outside the control of the EDC and is of sufficient intensity to give rise to a state of emergency or disaster being declared by State government; or

4. When mutual aid is provided to another EDC or utility, the assisting EDC may apply to the Board for permission to exclude its sustained interruptions from its Customer Average Interruption Duration Index (CAIDI) and System Average Interruption Frequency Index (SAIFI), as defined under N.J.A.C. 14:5-7.2, Calculations. Interruptions occurring during a major event in one or more operating areas shall not be included in the EDC’s CAIDI and SAIFI calculations of those affected operating area(s). However, interruption data for major events shall be collected, according to the reporting requirements outlined in N.J.A.C. 14:5-7.9.

“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.

“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.

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

“Wire zone” means the land located directly under the widest portion of a transmission line. The wire zone is bounded on each side by a location on the ground that is directly under the outermost transmission wire.

“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.

14:5-8.3 General provisions

(a) An electric public utility 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 electric public utility shall obtain, and shall ensure that its contractors obtain, all required permits and licenses prior to commencement of vegetation management.

(c) An electric public utility 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 electric public utility shall employ a vegetation manager (VM), who is an electric utility arborist, as defined at N.J.A.C. 14:5-8.2. 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. 14:5-8.7.

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

(f) An electric public utility 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 cost above the electric public utility’s cost to perform the vegetation management required by this subchapter. An electric public utility 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 electric public utility 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 vegetation management under transmission lines;
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 electric public utility 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 electric public utility due to lack of tree trimming, the municipality shall reimburse the electric public utility for these costs.

(h) An electric public utility 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) Upon a utility’s receiving notice of, or having actual knowledge of, any dead, rotten, or diseased vegetation which overhangs, leans toward, or may fall into an energized conductor, the electric public utility shall promptly remove or remedy the potential safety concern as promptly as possible. If removal of the vegetation requires the electric public utility to access or cross property for which it does not hold an easement or other legal authorization, the electric public utility shall take all reasonable steps to obtain any necessary permission from the property owner and remove or remedy the potential safety concern as promptly as possible. In response to a major event, the utility will only be required to remedy the potentially dangerous condition.

14:5-8.4 Maintenance cycle

(a) An electric public utility shall perform an annual visual inspection of all energized conductors, 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 electric public utility 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 electric public utility 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 electric public utility becomes aware either through notification or during the inspections required under (a) above or at any other time, of any vegetation close enough to pose a threat to its energized conductor, which is likely to affect reliability or safety prior to the next required vegetation management, the electric utility shall ensure that necessary vegetation management is promptly performed as required under N.J.A.C. 14:5-8.5.

14:5-8.5 Technical standards for vegetation management

(a) Each electric public utility 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;

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;

5. Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush — Safety Requirements, 1994. This document, also known as ANSI Z133.1, is published by the American National Standards Institute, and may be obtained at 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 C2-2002. ISBN: Z2-RES69-02 is published by the Institute of Electrical and Electronics Engineers, Inc and may be purchased at 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 electric public utility 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 electric public utility shall provide a copy of their vegetation management standards and guidelines to the Board by January 17, 2007. If an electric public utility 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 electric public utility'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 electric utility 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 electric public utility 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:

1. The electric public utility obtains written consent to leave the trimmings or cut vegetation, from the owner of the property upon which the trimmings or cut vegetation are located; or
2. The vegetation management activities are performed as a direct result of a major event, in which case the electric public utility shall remove the trimmings and cut vegetation that was cut or trimmed as part of its vegetation management activities, after the conclusion of the major event.

14:5-8.6 Transmission line vegetation management

(a) In addition to the other requirements of this subchapter, transmission lines, as defined at N.J.A.C. 14:5-8.2, are subject to the requirements in this section.

(b) An electric public utility shall meet the requirements of the National Electric Safety Code (C-2 2002) 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 (C-2 2002).

(d) An electric public utility 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 electric public utility shall ensure that the following requirements for transmission lines are met:

1. Clearing under transmission lines shall be wide enough so that no vegetation or parts of vegetation will grow or fall into the transmission lines;
2. An electric public utility shall not allow any vegetation that grows taller than 15 feet at maturity to grow anywhere within a transmission line right of way;

3. An electric public utility shall not allow woody plants that naturally mature above three feet tall to grow in the wire zone without prior notice and inspection by the electric public utility's vegetation manager;

4. The electric public utility 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. 14:5-8.5(a);

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 electric public utility has cleared a right of way of vegetation and bare soil is exposed, the utility 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 <http://www.state.nj.us/agriculture/rural/natsrc.htm>;

8. To the extent that any plant species identified as invasive and non-indigenous to New Jersey poses a hazard to electrical transmission conductors, the electric public utility shall make reasonable efforts to eliminate the species identified as invasive and non-indigenous in Snyder, David and Sylvan R. Kaufman, 2004, from the entire right of way. 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 electric public utility 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 electric public utility shall notify owners of land upon which the utility holds a right of way of the requirements in this subsection, through a separate direct mailing.

(e) 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. 14:5-8.5(a), or equivalent publications.

(f) Each year, before June 1, the electric public utility shall develop a schedule for transmission line vegetation management, which shall be included in the electric public utility's annual system performance report as required by N.J.A.C. 14:5-7. 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. 14:5-8.4(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 electric public utility.

14:5-8.7 Training, recordkeeping and reporting

(a) Each electric public utility shall ensure that all persons who perform vegetation management for the utility, whether employees or contractors, are trained in the proper care of trees and other woody plants in order to provide safe, reliable electric service, are knowledgeable regarding safety practices and line clearance techniques, and have demonstrated the ability to perform the work safely.

(b) Each electric public utility shall keep a record of all personnel used by a contractor or the utility to perform vegetation management for the electric public utility, and the dates and types of training that each has received.

(c) The electric public utility shall monitor and document all vegetation management and related activities. Documentation 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 electric public utility 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 an annual report to be filed with the Board by May 31st each year. This information shall include, at a minimum, the name of each municipality in which the electric public utility conducted vegetation management during the preceding year, and all circuits affected.

14:5-8.8 Public notice of planned vegetation management

(a) Each electric public utility shall make a diligent attempt to notify all property owners that may be affected by planned vegetation management. This requirement will be satisfied if the electric public utility provides written notice to affected property owners at least seven days, but not more than 45 days, prior to performing any vegetation management activity. Notice shall be provided by separate direct mailing or any other Board-approved method.

(b) Each electric public utility shall maintain a record of the dates, content, and addresses to which all notices provided under (a) above for a period of five years after notices are sent.

(c) Each electric public utility or its contractor 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 electric utility and the entity or authority.

(d) An electric public utility 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 (c) 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 form appropriate to each electric public utility's procedures and easement rights.

14:5-8.9 Outreach programs

(a) Each electric public utility shall conduct an annual public education program to inform its customers, as well as the municipalities and public agencies in the electric public utility's service territory, of the importance of vegetation management, and of the electric public utility'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 electric public utility shall post its public education materials on its website.

14:5-8.10 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. No penalties would be imposed for violations of the subchapter for a period of six months from the initial date of enactment.

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

(c) An electric public utility that violates this subchapter shall be liable for mitigating all costs incurred as the result of the violation.

(d) Fines and costs 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.

(e) 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 sanction or fine to the size of the company charged; and
5. Events judged to be beyond the violator's control.