

**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**

Chapter 5, Electric Service, expires on August 21, 2007.

**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. 277(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 Subchapter 7 was repealed by R.1977 d.37, effective February 17, 1977.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Subchapter 4, Regulation for Residential Electric Underground Extensions, was repealed and Subchapter 4, Extension of Electric Service, was adopted as new rules by R.2004 d.462, effective December 20, 2004.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).

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**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.