#### DOCKET NO. 070303-TP

#### CERTIFICATION OF

## PUBLIC SERVICE COMMISSION ADMINISTRATIVE RULES

## FILED WITH THE

#### DEPARTMENT OF STATE

I do hereby certify:

 $\frac{|x|}{(1)}$  That all statutory rulemaking requirements of Chapter 120, F.S., have been complied with; and

 $\underline{x}$  (2) There is no administrative determination under subsection 120.56(2), F.S., pending on any rule covered by this certification; and

 $\underline{x}$  (3) All rules covered by this certification are filed within the prescribed time limitations of paragraph 120.54(3)(e), F.S. They are filed not less than 28 days after the notice required by paragraph 120.54(3)(a), F.S., and;

 $\underline{x}$  (a) Are filed not more than 90 days after the notice; or

(b) Are filed not more than 90 days after the notice not including days an administrative determination was pending; or

// (c) Are filed more than 90 days after the notice, but not less than 21 days nor more than 45 days from the date of publication of the notice of change; or

// (d) Are filed more than 90 days after the notice, but not less than 14 nor more than 45 days after the adjournment of the final public hearing on the rule; or

 $\frac{//}{}$  (e) Are filed more than 90 days after the notice, but within 21 days after the date of receipt of all material authorized to be submitted at the hearing; or

DOCUMENT NUMBER-DATE

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FPSC-COMMISSION CLERK

// (f) Are filed more than 90 days after the notice, but within 21 days after the date the transcript was received by this agency; or

(g) Are filed not more than 90 days after the notice, not including days the adoption of the rule was postponed following notification from the Joint Administrative Procedures Committee that an objection to the rule was being considered; or

// (h) Are filed more than 90 days after the notice, but within 21 days after a good faith written proposal for a lower cost regulatory alternative to a proposed rule is submitted which substantially accomplishes the objectives of the law being implemented; or

// (i) Are filed more than 90 days after the notice, but within 21 days after a regulatory alternative is offered by the small business ombudsman.

Attached are the original and two copies of each rule covered by this certification. The rules are hereby adopted by the undersigned agency by and upon their filing with the Department of State.

<u>Rule No</u>.

25-4.036

Under the provision of subparagraph 120.54(3)(e)6., F.S., the rules take effect 20 days from the date filed with the Department of State or a later date as set out below:

Effective: \_\_\_\_\_(month) (day)

(year)

Commission Clerk



Number of Pages Certified

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1 25-4.036 Design and Construction of Plant.

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2	(1) The plant and facilities of the utility shall be designed, constructed, installed,
3	maintained and operated in accordance with provisions of the National Electrical Safety Code
4	(IEEE C2-2002 2007) and the National Electrical Code (NFPA 70-2005), which is
5	incorporated herein by reference, pertaining to the construction of telecommunications
6	facilities.
7	(2) Compliance with these codes and accepted good practice is necessary to insure as
8	far as reasonably possible continuity of service, uniformity in the quality of service furnished
9	and the safety of persons and property.
10	Specific Authority 350.127(2) FS.
11	Law Implemented 364.01(4), 364.03, <u>364.15</u> FS.
12	History-Revised 12-1-68, Amended 4-19-77, Formerly 25-4.36, Amended 2-5-86, 3-26-91, 5-
13	3-94, 12-23-02, 12-29-05.
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# CERTIFICATION OF

# MATERIALS INCORPORATED BY REFERENCE

# IN RULES FILED WITH THE DEPARTMENT OF STATE

Pursuant to Rule 1S-1.005, Florida Administrative Code, I do hereby certify that the attached are true and correct copies of the following materials incorporated by reference in Rule 25-4.036. Under the provisions of subparagraph 120.54(3)(e)(6), F.S., the attached materials take effect 20 days from the date filed with the Department of State, or a later date as specified in the rule.

National Electrical Safety Code C2-2007



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ANN COLE Commission Clerk

Number of Pages Certified



# National Electrical Safety Code® C2-2007





3 Park Avenue, New York, NY 10016-5997, USA



Accredited Standards Committee C2-2007

# National Electrical Safety Code®

Secretariat Institute of Electrical and Electronics Engineers, Inc.

Approved 20 April 2006 Institute of Electrical and Electronics Engineers, Inc.

> Approved 16 June 2006 **American National Standards Institute**

# 2007 Edition

Abstract: This standard covers basic provisions for safeguarding of persons from hazards arising from the installation, operation, or maintenance of (1) conductors and equipment in electric supply stations, and (2) overhead and underground electric supply and communication lines. It also includes work rules for the construction, maintenance, and operation of electric supply and communication lines and equipment. The standard is applicable to the systems and equipment operated by utilities, or similar systems and equipment, of an industrial establishment or complex under the control of qualified persons. This standard consists of the introduction, definitions, grounding rules, list of referenced and bibliographic documents, and Parts 1, 2, 3, and 4 of the 2007 Edition of the National Electrical Safety Code.

Keywords: communications industry safety; construction of communication lines; construction of electric supply lines; electrical safety; electric supply stations; electric utility stations; high-voltage safety; operation of communications systems; operation of electric supply systems; power station equipment; power station safety; public utility safety; safety work rules; underground communication line safety; underground electric line safety

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ISBN 0-7381-4893-8

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1 August 2006

# Recognized as an American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

# Foreword

This foreword is not a part of Accredited Standards Committee C2-2007, National Electrical Safety Code.

This publication consists of the parts of the National Electrical Safety Code<sup>®</sup> (NESC<sup>®</sup>) currently in effect. The former practice of designating parts by editions has not been practical for some time. In the 1977 Edition, Parts 1 and 4 were 6th editions; Part 2 was a 7th edition; Part 3 was a revision of the 6th edition; Part 2, Section 29, did not cover the same subject matter as the 5th edition; and Part 3 was withdrawn in 1970. In the 1987 Edition, revisions were made in all parts, and revisions to all parts have been made in subsequent editions. It is therefore recommended that reference to the NESC be made solely by the year of the published volume and desired part number. Separate copies of the individual parts are not available.

Work on the NESC started in 1913 at the National Bureau of Standards (NBS), resulting in the publication of NBS Circular 49. The last complete edition of the Code (the 5th edition, NBS Handbook H30) was issued in 1948, although separate portions had been available at various times starting in 1938. Part 2—Definitions, and the Grounding Rules, 6th edition, was issued as NBS Handbook H81, ANSI C2.2-1960, in November 1961, but work on other parts was not actively in process again until 1970.

In 1970 the C2 Committee decided to delete the Rules for the Installation and Maintenance of Electric Utilization Equipment (Part 3 of the 5th edition), now largely covered by the National Electrical Code<sup>®</sup> (NEC<sup>®</sup>)(NFPA 70, 2005 Edition), and the Rules for Radio Installation (Part 5 of the 5th edition) from future editions. The Discussion of the NESC, issued as NBS Handbook H4 (1928 Edition) for the 4th edition of the NESC and as NBS Handbook H39 for Part 2 of the Grounding Rules of the 5th edition, was not published for the 6th edition.

The 1981 Edition included major changes in Parts 1, 2, and 3, minor changes in Part 4, and the incorporation of the rules common to all parts into Section 1. The 1984 Edition was revised to update all references and to list those references in a new Section 3. Converted metric values, for information only, were added. Gender-related terminology was deleted. Section 1—Introduction, Section 2—Definitions, Section 3—References, and Section 9—Grounding Methods, were made applicable to each of the Parts 1, 2, 3, and 4.

The 1987 Edition was revised extensively. Definitions were changed or added. Requirements affecting grounding methods, electric supply stations, overhead line clearances and loading, underground lines, and work rules were revised.

The 1990 Edition included several major changes. General rules were revised. A significant change to the method for specifying overhead line clearances was made and the rationale added as Appendix A. Requirements for clearances of overhead lines from grain bins and an alternate method for determining the strength requirements for wood structures was added. Rules covering grounding methods, electric supply stations, underground lines, and work rules were changed.

In the 1993 Edition, changes were made in the rules applicable to emergency and temporary installations. In Section 9 and Parts 1, 2, and 3, rules were extended or clarified to include HVDC systems. The requirements for random separation of direct-buried supply and communications systems were modified for consistency and clarity, as was the rule in Part 4 on tagging electric supply circuits.

In the 1997 Edition, the most notable general change that took place is that numerical values in the metric (SI) system are shown in the preferred position, with customary inch-foot-pound values (inside parentheses) following. A bibliography, Appendix B, which consists of a list of resources identified in notes or recommendations, was added. Changes were made to rules affecting grounding, electric supply stations, and overhead lines, particularly with regard to clearance rules applicable to emergency and temporary installations. Strength requirements contained in Sections 24, 25, and 26 were revised completely.

Underground line requirements for random separation for underground lines of direct-buried cables were modified. The requirement for cable identification marking by means of sequentially placed logos was introduced. Work rules added a requirement that warning signs and tags comply with applicable ANSI standards, tagging requirements were clarified with regard to SCADA, and extensive requirements for fall protection were added.

In the 2002 Edition, several changes were made that affected all or several parts of the Code. Particularly, this edition clarifies interfaces between the NEC and NESC with regard to Code jurisdiction in the area of street lights and area lights. Also included is clarification for situations between utility workers and their authorized contractors and installations on industrial complexes.

The major revisions for the 2007 Edition include grounding, moving sag calculations to Section 23, moving guy and span wires insulator rules to Section 21, phasing out of the alternate method for load factors and strength factors, flammable materials transported, phase-to-phase cover-up, and minimum approach distance tables.

Subcommittee 1 concerned itself with assuring continuity between subcommittees and supervising the addition of definitions and references. Definitions included work on ducts, conduits, conduit systems raceways, overvoltage/transient conditions, shield wires/static wires, flashover/sparkover, sag, creep, readily climbable/not readily climbable, and others. Inspection and work rules as related to Rule 13 were clarified. The extensive changes made by Working Group 4.10 on overhead clearances was reviewed and accepted for inclusion in Section 23 as well as in a new Appendix B to the Code. A similar review of the work by Subcommittee 5 led to creation of new Appendix C to cover application of extreme wind loading covered in Rule 250C.

Section 9—Based on extensive studies, steel poles are now permitted as grounding electrodes, and Rule 97G mandates common bonding between communication and power grounding electrodes, with additional information on common bonding given in Rule 99. Metallic water piping systems are no longer a preferred grounding electrode. Changes to Rule 96 clarify ground resistance requirements, and changes to Rule 94B clarify dimensional requirements for ground rods.

Part 1—Selected column headings have been revised for clarity, and inconsistencies in Tables 124-1 and 125-1 corrected.

Part 2—Overhead clearances. A new approach for calculating clearances is detailed in new Section 23 and Appendix B. Rules related to sag calculation for conductor sags as related to clearances were moved from Sections 25 and 26 (loading and strength) into sections covering clearances. All calculations in which both loaded and unloaded conductors involving ice and wind when used for strength calculations remain in Sections 25 and 26. Rule 215C2 was revised to require all guys regardless of exposure to be insulated or grounded. Rules related to guy and span wire insulators moved from Rule 279 to Rule 215C2 to improve subject matter retrieval from the Code. The vertical clearance of a service drop attached to a mast, porch, deck, or balcony has been increased from 2.45 to 3 m (8 to 10 ft). Rule 235G has been changed to allow multiplex line cable up to 750 V to attach to the same support bracket as neutral conductors meeting Rule 230E1.

Part 2—Strength and loading. No modifications were made to Rule 250C to remove the exemption that excludes structures of less than 18 m (60 ft) height from having to meet the extreme wind requirements. The efficacy of doing so will be considered again for the 2012 Edition. Insulator strength ratings and conductor tensions are scheduled for study with possible changes to the 2012 Edition. Specific load factors in Tables 253-1 and 253-2 have been reduced. Tables 253-2 and 261-1B covering alternate load factors and strength factors, respectively, will be phased out in July 2010. They will be replaced by Tables 253-1 and 261-1A that are applicable to all materials. Load and strength factors have been specified for fiber reinforced plastic (FRP) materials, and strength factors for FRP structures, crossarms, and braces have been added. Rules 250A, 253, and 261N have been made more specific in dealing with construction maintenance loads.

Rule 261A2e, which permitted poles of reduced strength to remain in service under the specific condition of being supported by stronger poles on each side of the pole, has been removed. In the long-term view, pole design is tending to move in the direction of Probabilistic Design (LRFD) away from Deterministic Design, a trend which is in concert with a majority of other industries.

Part 3—Rule 311C was added to permit supply and communication cables to be laid directly on grade, providing they do not obstruct traffic or pedestrians and meet other applicable rules. Rule 351C1 was clarified to better describe the limitations of where aboveground pools may be located relative to supply cable, and also state the rule that applies to aboveground pools. It is now recognized that all flammable material transported in pipelines is under some conditions considered hazardous because of location. The Code now requires the same radial separation of 300 mm (12 in) for supply and communication cables from all lines that transport flammable material, not only fuel lines. The rule now defines a flammable liquid.

Part 4—Work revolved largely around expanding guidelines for use of fire resistant (FR) clothing and other safety equipment such as voltage protection devices. These guidelines include arc hazard analysis and reference tables. A new rule was introduced to address high-frequency radiation effects on workers in both the supply and communications spaces arising from communication antennas mounted in those spaces. A new rule requiring phase-to-phase cover-up when guarding against phase-to-phase contact was added. Changes were made to existing minimum approach distance tables. These distances agree with those published in IEEE Std IEEE  $516^{\text{TM}}$ .<sup>①</sup>

Substantive changes in the 2007 Edition are identified by a bar in the left-hand margin. In several cases, rules have been relocated without substantive changes in the wording. In these cases, only the rule numbers have been indicated as having been changed.

The Institute of Electrical and Electronics Engineers, Inc., was designated as the administrative secretariat for C2 in January 1973, assuming the functions formerly performed by the National Bureau of Standards.

Comments on the rules and suggestions for their improvement are invited, especially from those who have experience in their practical application. In future editions every effort will be made to improve the rules, both in the adequacy of coverage and in the clarification of requirements. Comments should be addressed to:

Secretary National Electrical Safety Code Committee Institute of Electrical and Electronics Engineers, Inc. 445 Hoes Lane P.O. Box 1331 Piscataway, NJ 08855-1331

A representative Interpretations Subcommittee has been established to prepare replies to requests for interpretation of the rules contained in the Code. Requests for interpretation should state the rule in question, as well as the conditions under which it is being applied. Interpretations are intended to clarify the intent of specific rules and are not intended to supply consulting information on the application of the Code. Requests for interpretation should be sent to the address above.

If the request is suitable for processing, it will be sent to the Interpretations Subcommittee. After consideration by the committee, which may involve many exchanges of correspondence, the inquirer will be notified of its decision. Decisions are published regularly and may be ordered or accessed online at no cost at http://standards.ieee.org/nsec.

The NESC as written is a voluntary standard. However, some editions and some parts of the Code have been adopted, with and without changes, by some state and local jurisdictional authorities. To determine the legal

①Information on references can be found in Section 3.

status of the NESC in any particular state or locality within a state, the authority having jurisdiction should be contacted.

The revision cycle for the 2012 Edition of the NESC will be fully electronic. Change proposals and comments will be submitted to the NESC Secretary online via the Internet. For information on how this electronic revision process will take place and for updates and complete information on the NESC, please visit the National Electrical Safety Code Zone on the IEEE Standards Web site at http://standards.ieee.org/ nesc.

Rule 25-4.036 Docket No. 070303-TP

#### SUMMARY OF RULE

Rule 25-4.036 requires that the plant and facilities of regulated companies be designed, constructed, installed, maintained, and operated in accordance with the provisions of the National Electrical Safety Code. The proposed amendments would update the rule to reflect the 2007 edition of the Code.

#### SUMMARY OF HEARINGS ON THE RULE

No hearing was requested and none was held.

#### FACTS AND CIRCUMSTANCES JUSTIFYING THE RULE

The National Electrical Safety Code provides standards that must be followed by entities that design, install, operate and maintain electrical instrumentation, including the associated wiring that serves to provide power and/or signaling distribution. Moreover, the National Electrical Code provides uniform standards to minimize harm to persons or damage to properties. Rules 25-4.036 and 25-24.515 currently reflect the 2002 version of the National Electrical Safety code. The rules are being amended to reflect the most current version of the National Electrical Safety Code, which is the 2007 edition.

#### DOCKET NO. 070303-TP

#### CERTIFICATION OF

#### PUBLIC SERVICE COMMISSION ADMINISTRATIVE RULES

#### FILED WITH THE

#### DEPARTMENT OF STATE

I do hereby certify:

 $\frac{\mathbf{x}}{\mathbf{x}}$  (1) That all statutory rulemaking requirements of Chapter 120, F.S., have been complied with; and

 $\underline{x}$  (2) There is no administrative determination under subsection 120.56(2), F.S., pending on any rule covered by this certification; and

 $\underline{x}$  (3) All rules covered by this certification are filed within the prescribed time limitations of paragraph 120.54(3)(e), F.S. They are filed not less than 28 days after the notice required by paragraph 120.54(3)(a), F.S., and;

 $\underline{x}$  (a) Are filed not more than 90 days after the notice; or

// (b) Are filed not more than 90 days after the notice not including days an administrative determination was pending; or

// (c) Are filed more than 90 days after the notice, but not less than 21 days nor more than 45 days from the date of publication of the notice of change; or

// (d) Are filed more than 90 days after the notice, but not less than 14 nor more than 45 days after the adjournment of the final public hearing on the rule; or

 $\frac{1}{2}$  (e) Are filed more than 90 days after the notice, but within 21 days after the date of receipt of all material authorized to be submitted at the hearing; or

 $\frac{1}{2}$  (f) Are filed more than 90 days after the notice, but within 21 days after the date the transcript was received by this agency; or

// (g) Are filed not more than 90 days after the notice, not including days the adoption of the rule was postponed following notification from the Joint Administrative Procedures Committee that an objection to the rule was being considered; or

(h) Are filed more than 90 days after the notice, but within 21 days after a good faith written proposal for a lower cost regulatory alternative to a proposed rule is submitted which substantially accomplishes the objectives of the law being implemented; or

// (i) Are filed more than 90 days after the notice, but within 21 days after a regulatory alternative is offered by the small business ombudsman.

Attached are the original and two copies of each rule covered by this certification. The rules are hereby adopted by the undersigned agency by and upon their filing with the Department of State.

Rule No.

25-24.515

Under the provision of subparagraph 120.54(3)(e)6., F.S., the rules take effect 20 days from the date filed with the Department of State or a later date as set out below:

Effective:

(month) (day) (year)

ANN COLE Commission Clerk



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Number of Pages Certified

1 | 25-24.515 Pay Telephone Service.

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2	(1) For the purposes of this section, the term "direct free" shall mean without requiring
3	the use of a coin, paper money, credit card, or any other form of payment, even if the payment
4	will be returned.
5	(2) Pay telephone stations shall be lighted during the hours of darkness when light
6	from other sources is not adequate to read instructions and use the instrument.
7	(3) Each pay telephone station shall return any deposited amount if the call is not
8	completed, except messages to a Feature Group A access number.
9	(4) Each pay telephone station shall permit direct free access to the universal telephone
10	number "911" where operable.
11	(5) Each pay telephone station shall permit direct free access to dialtone.
12	(6) Each pay telephone station shall permit direct free access to toll free numbers (e.g.,
13	800, 877, and 888).
14	(7) Each pay telephone station shall complete calls to local and long distance directory
15	assistance.
16	(8) Each pay telephone station shall complete calls to the responsible party for repairs
17	or refunds by direct free access.
18	(9) Each pay telephone station shall be equipped with a legible sign, card, or plate of
19	reasonable permanence which shall identify the following:
20	(a) The telephone number and location address of the pay telephone station, name and
21	certificate number of the certificate holder, the party responsible for repairs and refunds,
22	address of responsible party, free phone number of responsible party, clear dialing instructions
23	(including notice of the lack of availability of local or toll services), and the local coin rate.
24	(b) For those pay telephone stations that will terminate conversation after a minimum
25	elapsed time, notice shall be included on the sign card as well as an audible announcement 30
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- 1 -

 $1 \mid$  seconds prior to termination of the phone call.

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2	(10) Each pay telephone station that provides access to any interexchange company
3	shall provide coin free access, except for Feature Group A access, to all locally available
4	interexchange companies. The pay telephone station shall provide such access through the
5	forms of access purchased by locally available long distance carriers such as 10XXX+0,
6	10XXXX+0, 101XXXX+0, 950, toll free (e.g., 800, 877, and 888) access.
7	(11) No sales solicitation shall be allowed during the interval between the last digit
8	dialed by the end user and connection with the interexchange carrier.
9	(12) All 0- calls shall be routed to a telecommunications company that is authorized by
10	the Commission to handle 0- calls. All other calls, including operator service calls, may be
11	routed to the pay telephone provider's carrier of choice, unless the end user dials the
12	appropriate access code for their carrier of choice, i.e., 950, 10XXX, 10XXXX, 101XXXX,
13	and toll free access (e.g., 800, 877, and 888).
14	(13)(a) Each pay telephone station shall allow incoming calls to be received at all
15	times, with the exception of those located at hospitals, schools, and locations specifically
16	exempted by the Commission. There shall be no charge for receiving incoming calls.
17	(b) A pay telephone provider may petition the Commission for an exemption from the
18	incoming call requirement for a period that shall not exceed two years from the effective date
19	of the Order granting the exemption. Requests for exemption from the requirement that each
20	pay telephone station allow incoming calls shall be accompanied by a completed Form
21	PSC/CMP-2 (02/99), entitled "Request to Block Incoming Calls," which is incorporated into
22	this rule by reference and may be obtained from the Commission's Division of Competitive
23	Markets and Enforcement. The form requires an attestation from the owner of the pay
24	telephone, the owner of the pay telephone location, and the chief of the responsible law
25	enforcement agency that the request is sought in order to deter criminal activity facilitated by
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incoming calls being received at the specified pay telephone. A separate form shall be filed for 1 each telephone number for which an exemption is sought. The provider of the pay telephone 2 may request subsequent two-year exemptions by filing another Form PSC/CMP-2 (02/99). 3 Where incoming calls are not received, central-office based intercept shall be provided at no 4 charge to the end user and a written notice shall be prominently displayed on the instrument 5 6 directly above or below the telephone number which states: "Incoming calls blocked at request of law enforcement." 7 8 (14) Each pay telephone station must be connected to an individual access line. (15)(a) Each pay telephone service company shall permit outgoing calls to be placed 9 10 from its pay telephone stations at all times. (b) Each pay telephone service company shall make all reasonable efforts to minimize 11 the extent and duration of interruptions of service. Service repair programs should have as 12 13 their objective the restoration of service on the same day that the interruption is reported to the 14 company. (Sundays and holidays excepted.) 15 (16)(a) Where there is a single pay telephone station, a directory shall be maintained at each station. Where there are two or more pay telephone stations located in a group, a 16 17 directory for the entire local calling area shall be maintained at every other station. However, where telephone pay stations are fully enclosed, a directory shall be maintained at each pay 18 telephone station. For purposes of this rule, the term "directory" shall mean both a current 19 20 white page directory for the local calling area and a reasonably current yellow page directory 21 that is appropriate for the calling area of the pay telephone station. 22 (b) Pay telephone stations that provide local directory assistance at no charge are exempt from the provisions in paragraph (16)(a). A notice must appear on the placard if local 23 24 directory assistance at no charge is being provided. 25 (17) Normal maintenance and coin collection activity shall include a review of the CODING: Words underlined are additions; words in struck through type are deletions from existing law.

- 3 -

1 cleanliness of each pay telephone station.

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2	(18)(a) Except as provided in paragraph (18)(b) below, each pay telephone station shall
3	conform to sections 4.1.3(17), 4.2.4, 4.2.5, 4.2.6, 4.5.1., 4.31.2, 4.31.3, and 4.31.5 of the ADA
4	Accessibility Guidelines for Buildings and Facilities, Appendix A to 28 CFR Part 36, (July 1,
5	2003 Edition), which sections are incorporated by reference into this rule. This rule does not
6	apply to public text telephone and closed circuit telephones.
7	(b) Pay telephones shall not be installed where the required "clear floor or ground
8	space" provided for in ADA Accessibility Guidelines for Buildings and Facilities sections
9	4.2.4.1, 4.2.4.2, and 4.31.2 would be reduced by a vehicle parked in a designated parking
10	space.
11	(19) Each pay telephone station shall permit end users to input unlimited digits for the
12	duration of the call.
13	(20) Toll Fraud Liability.
14	(a) A company providing interexchange telecommunications services or local
15	exchange telecommunications services shall not collect from a pay telephone provider for
16	charges billed to a line for calls that originated from that line through the use of access codes
17	such as 10XXX, 10XXXX, 101XXXX, 950, and toll free (e.g., 800, 877, 888) access codes, or
18	when the call originating from that line otherwise reached an operator position, if the
19	originating line is subscribed to outgoing call screening and the call was placed after the
20	effective date of the outgoing call screening order.
21	(b) A company providing interexchange telecommunications services or local
22	exchange telecommunications services shall not collect from a pay telephone provider for
23	charges for collect or third number billed calls, if the line to which the call was billed was
24	subscribed to incoming call screening and the call was placed after the effective date of the
25	incoming call screening order.
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- 4 -

from existing law.

(c) Any calls billed through the provider of local exchange telecommunications
services or directly by an interexchange company, or through a billing agent, which have been
identified as not collectible as described in paragraphs (20)(a) and (b) above, must be removed
from any pay telephone provider's bill after the pay telephone provider gives notice of the
fraudulent charges to the billing party. Pay telephone providers shall give such notice to the
provider of local exchange telecommunications services and the interexchange company in
writing no later than the due date of the bill.

8 (d) The provider of local exchange telecommunications services is responsible for
9 charges described in paragraph (20)(c) that are associated with the failure of the provider of
10 local exchange telecommunications services' screening services.

(e) The interexchange company is responsible for charges described in paragraph
 (20)(c) that are associated with the failure to properly validate calls via the appropriate
 provider of local exchange telecommunications services' data base.

(f) Definitions: For purposes of subsection (20) the term "Effective Date" shall mean
the date after the call screening order was placed and associated charges apply.

(g) Any charges accrued to a line when the subscriber has subscribed to the provider of
local exchange telecommunications services to screen calls described in paragraphs (20)(a)
and (b) above shall not be the basis for discontinuance of local and intrastate service.

(21) Providers serving confinement facilities shall provide for completion of all inmate
calls allowed by the confinement facility.

(22) Pay telephone stations located in confinement facilities shall be exempt from the
requirements of subsections (2), (4), (6), (7), (8), (10), (12), (13), (15), (16), and (19) of this
rule. Such pay telephone stations shall also be exempt from the requirements of subsection (9),
except that outgoing local and long distance calls may not be terminated until after a minimum
elapsed time of ten minutes. Audible and written disconnect notifications shall apply, and one
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- 5 -

1	access line shall not be connected to more than three pay telephone stations.
2	(23) Pay telephone facilities shall be designed, constructed, installed, maintained and
3	operated in accordance with provisions of the National Electrical Safety Code (IEEE C2-2002
4	2007) and the National Electrical Code (NEPA 70-2005), which are incorporated by reference.
5	Specific Authority 350.127(2) FS.
6	Law Implemented 364.03, 364.035, 364.063, 364.337, 364.3375, 364.345, <u>364.15</u> FS.
7	History-New 1-5-87, Amended 4-14-92, 12-21-92, 2-3-93, 10-10-94, 12-27-94, 9-5-95, 2-1-
8	99, 12-23-02, 4-5-05, 12-29-05.
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CODING: Words <u>underlined</u> are additions; words in <del>struck through</del> type are deletions from existing law.

## CERTIFICATION OF

## MATERIALS INCORPORATED BY REFERENCE

# IN RULES FILED WITH THE DEPARTMENT OF STATE

Pursuant to Rule 1S-1.005, Florida Administrative Code, I do hereby certify that the attached are true and correct copies of the following materials incorporated by reference in Rule 25-24.515. Under the provisions of subparagraph 120.54(3)(e)(6), F.S., the attached materials take effect 20 days from the date filed with the Department of State, or a later date as specified in the rule.

National Electrical Safety Code C2-2007



ANN COLE Commission Clerk

Number of Pages Certified

# National Electrical Safety Code® C2-2007





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Accredited Standards Committee C2-2007

# National Electrical Safety Code®

Secretariat Institute of Electrical and Electronics Engineers, Inc.

Approved 20 April 2006 Institute of Electrical and Electronics Engineers, Inc.

> Approved 16 June 2006 American National Standards Institute

# 2007 Edition

**Abstract:** This standard covers basic provisions for safeguarding of persons from hazards arising from the installation, operation, or maintenance of (1) conductors and equipment in electric supply stations, and (2) overhead and underground electric supply and communication lines. It also includes work rules for the construction, maintenance, and operation of electric supply and communication lines and equipment. The standard is applicable to the systems and equipment operated by utilities, or similar systems and equipment, of an industrial establishment or complex under the control of qualified persons. This standard consists of the introduction, definitions, grounding rules, list of referenced and bibliographic documents, and Parts 1, 2, 3, and 4 of the 2007 Edition of the National Electrical Safety Code.

**Keywords:** communications industry safety; construction of communication lines; construction of electric supply lines; electrical safety; electric supply stations; electric utility stations; high-voltage safety; operation of communications systems; operation of electric supply systems; power station equipment; power station safety; public utility safety; safety work rules; underground communication line safety; underground electric line safety

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ISBN 0-7381-4893-8

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1 August 2006

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An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

# Foreword

This foreword is not a part of Accredited Standards Committee C2-2007, National Electrical Safety Code.

This publication consists of the parts of the National Electrical Safety Code<sup>®</sup> (NESC<sup>®</sup>) currently in effect. The former practice of designating parts by editions has not been practical for some time. In the 1977 Edition, Parts 1 and 4 were 6th editions; Part 2 was a 7th edition; Part 3 was a revision of the 6th edition; Part 2, Section 29, did not cover the same subject matter as the 5th edition; and Part 3 was withdrawn in 1970. In the 1987 Edition, revisions were made in all parts, and revisions to all parts have been made in subsequent editions. It is therefore recommended that reference to the NESC be made solely by the year of the published volume and desired part number. Separate copies of the individual parts are not available.

Work on the NESC started in 1913 at the National Bureau of Standards (NBS), resulting in the publication of NBS Circular 49. The last complete edition of the Code (the 5th edition, NBS Handbook H30) was issued in 1948, although separate portions had been available at various times starting in 1938. Part 2—Definitions, and the Grounding Rules, 6th edition, was issued as NBS Handbook H81, ANSI C2.2-1960, in November 1961, but work on other parts was not actively in process again until 1970.

In 1970 the C2 Committee decided to delete the Rules for the Installation and Maintenance of Electric Utilization Equipment (Part 3 of the 5th edition), now largely covered by the National Electrical Code<sup>®</sup> (NEC<sup>®</sup>)(NFPA 70, 2005 Edition), and the Rules for Radio Installation (Part 5 of the 5th edition) from future editions. The Discussion of the NESC, issued as NBS Handbook H4 (1928 Edition) for the 4th edition of the NESC and as NBS Handbook H39 for Part 2 of the Grounding Rules of the 5th edition, was not published for the 6th edition.

The 1981 Edition included major changes in Parts 1, 2, and 3, minor changes in Part 4, and the incorporation of the rules common to all parts into Section 1. The 1984 Edition was revised to update all references and to list those references in a new Section 3. Converted metric values, for information only, were added. Gender-related terminology was deleted. Section 1—Introduction, Section 2—Definitions, Section 3—References, and Section 9—Grounding Methods, were made applicable to each of the Parts 1, 2, 3, and 4.

The 1987 Edition was revised extensively. Definitions were changed or added. Requirements affecting grounding methods, electric supply stations, overhead line clearances and loading, underground lines, and work rules were revised.

The 1990 Edition included several major changes. General rules were revised. A significant change to the method for specifying overhead line clearances was made and the rationale added as Appendix A. Requirements for clearances of overhead lines from grain bins and an alternate method for determining the strength requirements for wood structures was added. Rules covering grounding methods, electric supply stations, underground lines, and work rules were changed.

In the 1993 Edition, changes were made in the rules applicable to emergency and temporary installations. In Section 9 and Parts 1, 2, and 3, rules were extended or clarified to include HVDC systems. The requirements for random separation of direct-buried supply and communications systems were modified for consistency and clarity, as was the rule in Part 4 on tagging electric supply circuits.

In the 1997 Edition, the most notable general change that took place is that numerical values in the metric (SI) system are shown in the preferred position, with customary inch-foot-pound values (inside parentheses) following. A bibliography, Appendix B, which consists of a list of resources identified in notes or recommendations, was added. Changes were made to rules affecting grounding, electric supply stations, and overhead lines, particularly with regard to clearance rules applicable to emergency and temporary installations. Strength requirements contained in Sections 24, 25, and 26 were revised completely.

Underground line requirements for random separation for underground lines of direct-buried cables were modified. The requirement for cable identification marking by means of sequentially placed logos was introduced. Work rules added a requirement that warning signs and tags comply with applicable ANSI standards, tagging requirements were clarified with regard to SCADA, and extensive requirements for fall protection were added.

In the 2002 Edition, several changes were made that affected all or several parts of the Code. Particularly, this edition clarifies interfaces between the NEC and NESC with regard to Code jurisdiction in the area of street lights and area lights. Also included is clarification for situations between utility workers and their authorized contractors and installations on industrial complexes.

The major revisions for the 2007 Edition include grounding, moving sag calculations to Section 23, moving guy and span wires insulator rules to Section 21, phasing out of the alternate method for load factors and strength factors, flammable materials transported, phase-to-phase cover-up, and minimum approach distance tables.

Subcommittee 1 concerned itself with assuring continuity between subcommittees and supervising the addition of definitions and references. Definitions included work on ducts, conduits, conduit systems raceways, overvoltage/transient conditions, shield wires/static wires, flashover/sparkover, sag, creep, readily climbable/not readily climbable, and others. Inspection and work rules as related to Rule 13 were clarified. The extensive changes made by Working Group 4.10 on overhead clearances was reviewed and accepted for inclusion in Section 23 as well as in a new Appendix B to the Code. A similar review of the work by Subcommittee 5 led to creation of new Appendix C to cover application of extreme wind loading covered in Rule 250C.

Section 9—Based on extensive studies, steel poles are now permitted as grounding electrodes, and Rule 97G mandates common bonding between communication and power grounding electrodes, with additional information on common bonding given in Rule 99. Metallic water piping systems are no longer a preferred grounding electrode. Changes to Rule 96 clarify ground resistance requirements, and changes to Rule 94B clarify dimensional requirements for ground rods.

Part 1—Selected column headings have been revised for clarity, and inconsistencies in Tables 124-1 and 125-1 corrected.

Part 2—Overhead clearances. A new approach for calculating clearances is detailed in new Section 23 and Appendix B. Rules related to sag calculation for conductor sags as related to clearances were moved from Sections 25 and 26 (loading and strength) into sections covering clearances. All calculations in which both loaded and unloaded conductors involving ice and wind when used for strength calculations remain in Sections 25 and 26. Rule 215C2 was revised to require all guys regardless of exposure to be insulated or grounded. Rules related to guy and span wire insulators moved from Rule 279 to Rule 215C2 to improve subject matter retrieval from the Code. The vertical clearance of a service drop attached to a mast, porch, deck, or balcony has been increased from 2.45 to 3 m (8 to 10 ft). Rule 235G has been changed to allow multiplex line cable up to 750 V to attach to the same support bracket as neutral conductors meeting Rule 230E1.

Part 2—Strength and loading. No modifications were made to Rule 250C to remove the exemption that excludes structures of less than 18 m (60 ft) height from having to meet the extreme wind requirements. The efficacy of doing so will be considered again for the 2012 Edition. Insulator strength ratings and conductor tensions are scheduled for study with possible changes to the 2012 Edition. Specific load factors in Tables 253-1 and 253-2 have been reduced. Tables 253-2 and 261-1B covering alternate load factors and strength factors, respectively, will be phased out in July 2010. They will be replaced by Tables 253-1 and 261-1A that are applicable to all materials. Load and strength factors have been specified for fiber reinforced plastic (FRP) materials, and strength factors for FRP structures, crossarms, and braces have been added. Rules 250A, 253, and 261N have been made more specific in dealing with construction maintenance loads.

Rule 261A2e, which permitted poles of reduced strength to remain in service under the specific condition of being supported by stronger poles on each side of the pole, has been removed. In the long-term view, pole design is tending to move in the direction of Probabilistic Design (LRFD) away from Deterministic Design, a trend which is in concert with a majority of other industries.

Part 3—Rule 311C was added to permit supply and communication cables to be laid directly on grade, providing they do not obstruct traffic or pedestrians and meet other applicable rules. Rule 351C1 was clarified to better describe the limitations of where aboveground pools may be located relative to supply cable, and also state the rule that applies to aboveground pools. It is now recognized that all flammable material transported in pipelines is under some conditions considered hazardous because of location. The Code now requires the same radial separation of 300 mm (12 in) for supply and communication cables from all lines that transport flammable material, not only fuel lines. The rule now defines a flammable liquid.

Part 4—Work revolved largely around expanding guidelines for use of fire resistant (FR) clothing and other safety equipment such as voltage protection devices. These guidelines include arc hazard analysis and reference tables. A new rule was introduced to address high-frequency radiation effects on workers in both the supply and communications spaces arising from communication antennas mounted in those spaces. A new rule requiring phase-to-phase cover-up when guarding against phase-to-phase contact was added. Changes were made to existing minimum approach distance tables. These distances agree with those published in IEEE Std IEEE  $516^{TM}$ .<sup>①</sup>

Substantive changes in the 2007 Edition are identified by a bar in the left-hand margin. In several cases, rules have been relocated without substantive changes in the wording. In these cases, only the rule numbers have been indicated as having been changed.

The Institute of Electrical and Electronics Engineers, Inc., was designated as the administrative secretariat for C2 in January 1973, assuming the functions formerly performed by the National Bureau of Standards.

Comments on the rules and suggestions for their improvement are invited, especially from those who have experience in their practical application. In future editions every effort will be made to improve the rules, both in the adequacy of coverage and in the clarification of requirements. Comments should be addressed to:

Secretary National Electrical Safety Code Committee Institute of Electrical and Electronics Engineers, Inc. 445 Hoes Lane P.O. Box 1331 Piscataway, NJ 08855-1331

A representative Interpretations Subcommittee has been established to prepare replies to requests for interpretation of the rules contained in the Code. Requests for interpretation should state the rule in question, as well as the conditions under which it is being applied. Interpretations are intended to clarify the intent of specific rules and are not intended to supply consulting information on the application of the Code. Requests for interpretation should be sent to the address above.

If the request is suitable for processing, it will be sent to the Interpretations Subcommittee. After consideration by the committee, which may involve many exchanges of correspondence, the inquirer will be notified of its decision. Decisions are published regularly and may be ordered or accessed online at no cost at http://standards.ieee.org/nsec.

The NESC as written is a voluntary standard. However, some editions and some parts of the Code have been adopted, with and without changes, by some state and local jurisdictional authorities. To determine the legal

OInformation on references can be found in Section 3.

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status of the NESC in any particular state or locality within a state, the authority having jurisdiction should be contacted.

The revision cycle for the 2012 Edition of the NESC will be fully electronic. Change proposals and comments will be submitted to the NESC Secretary online via the Internet. For information on how this electronic revision process will take place and for updates and complete information on the NESC, please visit the National Electrical Safety Code Zone on the IEEE Standards Web site at http://standards.ieee.org/ nesc.

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Rule 25-24.515 Docket No. 070303-TP

#### SUMMARY OF RULE

Rule 25-24.515 requires that the plant and facilities of regulated companies be designed, constructed, installed, maintained, and operated in accordance with the provisions of the National Electrical Safety Code. The proposed amendments would update the rule to reflect the 2007 edition of the Code.

### SUMMARY OF HEARINGS ON THE RULE

No hearing was requested and none was held.

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# FACTS AND CIRCUMSTANCES JUSTIFYING THE RULE

The National Electrical Safety Code provides standards that must be followed by entities that design, install, operate and maintain electrical instrumentation, including the associated wiring that serves to provide power and/or signaling distribution. Moreover, the National Electrical Code provides uniform standards to minimize harm to persons or damage to properties. Rules 25-4.036 and 25-24.515 currently reflect the 2002 version of the National Electrical Safety code. The rules are being amended to reflect the most current version of the National Electrical Safety Code, which is the 2007 edition.