

# Preprint Proposals for the 2012 Edition of the National Electrical Safety Code®

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1 September 2009



**IEEE**

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# **Preprint Proposals for the 2012 Edition of the National Electrical Safety Code**

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## Foreword

This publication has been prepared to provide all interested persons an opportunity to study and comment on the Proposed Revisions to be incorporated into the 2012 Edition of the National Electrical Safety Code (NESC®).

This Preprint provides the full text of each proposal to revise the 2007 Edition of the NESC together with the recommendation of the subcommittee that has cognizance of the rule addressed by the change proposal (CP).

The deadline for receipt of comments on the Proposal Revision contained herein is 1 May 2010. All comments shall be submitted through the Web site shown below. Only comments that are submitted electronically through the Web site will be accepted.

<http://standards.ieee.org/nesc/rp/welcome.html>

Comments for each separate topic are to be uploaded separately using the template at the following URL:

<http://standards.ieee.org/nesc/rp/Comment.doc>.

In those cases where a single CP or a group of related CPs affects rules within the scopes of two or more subcommittees, the recommendation of all subcommittees affected are included. Where the recommendation of two or more subcommittees are not compatible with each other, a recommendation by Subcommittee 1, which is responsible for coordination, is also included.

Please note that the subcommittee recommendations herein are subject to further review and revision by the cognizant subcommittee following study and evaluation of all comments received. The subcommittee final recommendation will be prepared for a January 2011 letter ballot of the National Electrical Safety Code Committee. It is anticipated that the approved text will be submitted for American National Standards Institute approval in May 2011, with publication of the NESC 2012 Edition on 1 August 2011.

# Procedure for Revising the National Electrical Safety Code

## 1. Preparation of Proposals for Amendment

NOTE: The procedures for the collection of change proposals are subject to change as the revision of the 2012 Edition of the NESC approaches. Logon to the NESC Zone at <http://standards.ieee.org/nesc/> for updates.

### 1.1 A proposal may be prepared by any

- (a) Substantially interested person
- (b) Interested organization
- (c) NESC Subcommittee
- (d) Member of the NESC Committee or its subcommittees

1.2 Change proposals shall be submitted to Secretary of the National Electrical Safety Code Committee via the following URL: <http://standards.ieee.org/nesc/>, using the change proposal form on the Web site.

1.3 Each separate topic shall begin on a separate form and shall only address one rule, unless a change in a rule directly affects another rule. If a proposal references documents not readily available to all subcommittee members, sufficient copies of the referenced documents to supply the subcommittee must be furnished.

### 1.4 The proposal shall consist of

- (a) A statement, in NESC rule form, of the exact change, rewording, or new material proposed
  - (b) Words to be deleted shall be indicated via strike-throughs, and words to be added shall be underlined.
  - (c) The name of the submitter (organization or individual as applicable)
  - (d) Supporting comments, giving the reasons why the NESC should be revised
- (NOTE: A change proposal will not be accepted if these steps are not followed.)

## 2. The NESC Secretary will

- (a) Acknowledge receipt of proposals for revision
- (b) Distribute to each member of the appropriate NESC Subcommittee all of the proposals received, arranged in a coordinated sequence

## 3. Subcommittee recommendation

The NESC Subcommittee responsible will consider each proposal and take one or more of the following steps.

- (a) Endorse the proposal as received.
- (b) Prepare a proposed revision or addition for the NESC (this may be a coordination of several comments, or a committee consensus on a modification of a proposal).
- (c) Refer the proposal to a technical working group for detailed consideration.
- (d) Request coordination with other NESC Subcommittees.
- (e) Recommend rejection of the proposal, for stated reasons.

For each item, the responsible subcommittee shall prepare a voting statement, accompanied by all members' statements concerning their votes (cogent reasons are required for negative votes). Steps (c) and (d) are intended to result, eventually, in a proposal of category (b).

Action under steps (c) or (d) shall be completed and reported to the subcommittee before the end of the public review period if the item is to be included in the upcoming revision.

#### 4. Preprint of proposals

The NESC Secretary shall organize and publish a Preprint of the proposed revisions including:

- (a) The original proposal as received from the submitter.
- (b) The recommendation of the subcommittee with respect to the proposal (including a voting statement and subcommittee members' statements).
- (c) Copies of submittal form for comments.

The Preprint shall be distributed to all members of NESC Subcommittees and representatives of organizations comprising the NESC Committee. Copies shall be available for sale to other interested parties. Notice of availability of the Preprint shall be submitted to ANSI for publication in *ANSI Standards Action*. The Preprint shall carry information on how to submit comments on the proposals and the final date for such submissions.

#### 5. Final processing of proposed revisions and comments

5.1 Following the public review period, the Secretary shall organize and distribute for subcommittee consideration all comments received electronically via the following URL: <http://standards.ieee.org/nesc/rp/welcome.html>.

5.2 The Preprint and the comments received shall be reconsidered by the subcommittees. No new change proposals may be considered.

- (a) The subcommittee may recommend adoption or rejection of the proposal by majority vote.
- (b) When extended technical consideration or resolution of differing or conflicting points of view is necessary, the subcommittee shall refer the problem to a working group of the subcommittee for proposed resolution. If expeditious resolution is not possible, the subject shall be held on the docket.

Each working group shall provide, to its parent subcommittee, recommendations on matters considered as a result of subcommittee referrals under items 3(c) and 5.2(b).

Each subcommittee shall prepare a report showing its proposed revisions and all items held on the docket together with a plan for their disposition.

5.3 The Secretary shall provide commenters with copies of actions taken on the rules affected by their comments, and shall make all such reports available for examination upon request.

#### 6. Final approval

6.1 Based upon the subcommittee reports, the Secretary shall prepare a draft of the revision of the NESC and distribute copies to

- (a) The NESC Committee for approval by a six-week letter ballot
- (b) The American National Standards Institute Board of Standards Review for concurrent 60-day public review

6.2 Comments received in response to the letter ballot and public review shall be referred to the Executive Subcommittee for resolution or referral to the appropriate subcommittee. Those items on which consensus cannot be reached shall be referred to the appropriate subcommittee for consideration during the next revision cycle. Unless a consensus for revision is established, the requirements of the current edition shall carry over to the proposed edition.

# Committee Membership

**Michael J. Hyland, Chair**

**James R. Tomaseski, Vice Chair**

**O. C. Amrhyn, Past Chair**

**William A. Ash, Secretary**

| Organization represented | Voting position | Name               | Employed by                                |
|--------------------------|-----------------|--------------------|--|
| Chair                    | (Principal)     | Michael J. Hyland  | American Public Power Association          |
| Past Chair               | (Principal)     | O. C. Amrhyn       | OPEC                                       |
| AEIC                     | (Principal)     | Swapan Dey         | NSTAR Electric & Gas Corp.                 |
|                          | (Alternate)     | Billy Raley        | Progress Energy                            |
| APPA                     | (Principal)     | Nathan Mitchell    | American Public Power Association          |
| APTA                     | (Principal)     | George S. Pristach | Parsons Brinckerhoff                       |
| ATIS                     | (Principal)     | Lawrence M. Slavin | Outside Plant Consulting Services, Inc.    |
| BPA                      | (Principal)     | Maggie Emery       | Bonneville Power Administration            |
| EEI                      | (Principal)     | Ewell T. Robeson   | Progress Energy                            |
|                          | (Alternate)     | Edward Harrel      | Oncor Electric Delivery                    |
| EIA                      | (Principal)     | Percy E. Pool      | Verizon Network Services                   |
|                          | (Alternate)     | Marie Shaw         | Verizon Network Services                   |
| IBEW                     | (Principal)     | James R. Tomaseski | IBEW                                       |
| IEC                      | (Principal)     | James C. Tuggle    | Malpas Group Inc.                          |
|                          | (Alternate)     | Robert W. Baird    | Independent Electrical Contractors         |
|                          | (Alternate)     | John Masarick      | Independent Electrical Contractors         |
| IEEE                     | (Principal)     | Frank A. Denbrock  | D&A Consulting Engineers                   |
|                          | (Alternate)     | Vernon K. Lawton   | Allgeier, Martin & Associates              |
| Intl Munic Sign Assn     | (Principal)     | William S. Farrell | International Municipal Signal Association |
| NARUC                    | (Principal)     | Paul Emerson       | NY State Dept. of Public Service           |
| NCTA                     | (Principal)     | Rex Bullinger      | National Cable Television Association      |
|                          | (Alternate)     | Christopher Austin | Time Warner Cable, NYC-Liberty Division    |
| NECA                     | (Principal)     | O. L. Davis        | Manzano-Western Incorporated               |
| NEMA                     | (Principal)     | Vincent Baclawski  | National Electrical Manufacturers Assoc.   |
|                          | (Alternate)     | Scott Choinski     | National Electrical Manufacturers Assoc.   |
| NRECA                    | (Principal)     | Robert D. Saint    | National Rural Electric Cooperative Assoc. |
|                          | (Alternate)     | Michael C. Pehosh  | National Rural Electric Cooperative Assoc. |
| NSC                      | (Principal)     | Kenneth Schriner   | Western Area Power Administration          |
| NSP                      | (Principal)     | Robert S. Fuller   | Texas-New Mexico Power Co.                 |
| RUC                      | (Principal)     | Georg A. Shultz    | Rural Utilities Service                    |
| STATE                    | (Principal)     | Timothy Cooke      | Times Fiber Communications, Inc.           |
| TVA                      | (Principal)     | Clayton L. Clem    | TVA Power System Operations                |
|                          | (Alternate)     | Stephen Cantrell   | TVA Power System Operations                |
| WAPA                     | (Principal)     | Jeffrey Wild       | WAPA                                       |
| Canadian Stds Assoc.     | Liaison         | David Singleton    | Cogeco Cable Canada Inc.                   |

**Subcommittee 1**  
**Purpose, Scope, Application, Definitions, and References**  
**(Sections 1, 2, and 3)**

**Allen L. Clapp, Chair**

**Charles C. Bleakley, Secretary**

| <b>Name</b>         | <b>Voting position</b> | <b>Employed by</b>                | <b>Organization represented</b> |
|---------------------|------------------------|-----------------------------------|---------------------------------|
| Donald Hooper       | (Principal)            | ES&C, Inc.                        | Int. SC                         |
| Michael J. Hyland   | (Principal)            | American Public Power Association | Main                            |
| Allen L. Clapp      | (Principal)            | Clapp Research Associates, P.C.   | SC1                             |
| John B. Dagenhart   | (Principal)            | Clapp Research Associates, P.C.   | SC2                             |
| Ewell T. Robeson    | (Alternate)            | Progress Energy                   | SC2                             |
| D. J. Christofersen | (Principal)            | CeCe                              | SC3                             |
| Gary R. Engmann     | (Alternate)            | IEEE PES/Sub                      | SC3                             |
| David G. Komassa    | (Principal)            | We Energies                       | SC4                             |
| Eric K. Engdahl     | (Alternate)            | American Electric Power           | SC4                             |
| Frank A. Denbrock   | (Principal)            | D&A Consulting Engineers          | SC5                             |
| Charles C. Bleakley | (Principal)            | Retired                           | SC7                             |
| John C. Spence      | (Alternate)            | Baltimore Gas & Electric Co.      | SC7                             |
| James R. Tomaseski  | (Principal)            | IBEW                              | SC8                             |
| Samuel Stonerock    | (Alternate)            | Southern California Edison Co.    | SC8                             |

**Subcommittee 2**  
**Grounding Methods**  
**(Section 9)**

**John B. Dagenhart, Chair**

**Ewell T. Robeson, Secretary**

| <b>Name</b>        | <b>Voting position</b> | <b>Employed by</b>        | <b>Organization represented</b> |
|--------------------|------------------------|---------------------------|---------------------------------|
| Trevor Bowmer      | (Principal)            | Telcordia                 | ATIS                            |
| Michael M. Dixon   | (Principal)            | Ameren                    | EEI                             |
| Robert Molde       | (Principal)            | Xcel Energy               | EEI                             |
| Gregory Obach      | (Alternate)            | Edison Electric Institute | EEI                             |
| Justin Russek      | (Alternate)            | Westar Energy             | EEI                             |
| Laura E. Gaunt     | (Alternate)            | Northeast Utilities       | EEI                             |
| Mark Schlegel      | (Alternate)            | American Electric Power   | EEI                             |
| Robert Wellman     | (Alternate)            | American Electric Power   | EEI                             |
| Timothy P. Hayden  | (Alternate)            | National Grid             | EEI                             |
| Ewell T. Robeson   | (Principal)            | Progress Energy           | EEI                             |
| Percy E. Pool      | (Principal)            | Verizon Network Services  | EIA                             |
| John Korman        | (Alternate)            | National Grid             | EIA                             |
| James R. Tomaseski | (Principal)            | IBEW                      | IBEW                            |

| <b>Name</b>       | <b>Voting position</b> | <b>Employed by</b>                         | <b>Organization represented</b> |
|-------------------|------------------------|--|---------------------------------|
| Donald W. Zipse   | (Principal)            | Zipse Electrical Engineering Inc.          | IEEE/IAS                        |
| John B. Dagenhart | (Principal)            | Clapp Research Associates, P.C.            | IEEE/PES/<br>T&D                |
| Ned Maxwell       | (Principal)            | Public Utilities Commission of OH          | NARUC                           |
| Roger J. Montambo | (Principal)            | Galvan Industries                          | NEMA                            |
| Robert D. Saint   | (Principal)            | National Rural Electric Cooperative Assoc. | NRECA                           |
| Michael C. Pehosh | (Alternate)            | National Rural Electric Cooperative Assoc. | NRECA                           |
| Harvey L. Bowles  | (Principal)            | Rural Utilities Service                    | RUS                             |
| Timothy Cooke     | (Principal)            | Times Fiber Communications, Inc.           | SCFE                            |
| Keith Reese       | (Principal)            | Georgia Power Company                      | SEEX                            |
| John Bruce        | (Alternate)            | Dominion Virginia Power                    | SEEX                            |

**Subcommittee 3**  
**Electric Supply Stations**  
*(Sections 10-19)*

**D. J. Christofersen, Chair**

**Gary R. Engmann, Secretary**

| <b>Name</b>           | <b>Voting position</b> | <b>Employed by</b>                         | <b>Organization represented</b> |
|-----------------------|------------------------|--|---------------------------------|
| Alton L. Comans       | (Principal)            | Alabama Power Company                      | AEIC                            |
| James Houston         | (Alternate)            | Alabama Power Company                      | AEIC                            |
| George Zaczek         | (Principal)            | Eugene Electric & Water Board              | APPA                            |
| Brian Winoski         | (Principal)            | Niagara Mohawk Power Corp.                 | EEI                             |
| Kenneth Posey         | (Alternate)            | American Electric Power                    | EEI                             |
| Kevin Robinson        | (Alternate)            | American Electric Power                    | EEI                             |
| Timothy Jyrkas        | (Alternate)            | Xcel Energy                                | EEI                             |
| James R. Tomaseski    | (Principal)            | IBEW                                       | IBEW                            |
| D. J. Christofersen   | (Principal)            | CeCe                                       | IEEE/PES/<br>SUB                |
| Gary R. Engmann       | (Principal)            | Burns and McDonnell Engineering            | IEEE/PES/<br>SUB                |
| W. Bruce Dietzman     | (Principal)            | Oncor Electric Delivery Company            | IEEE/PES/<br>SUB                |
| Kenneth D. White      | (Alternate)            | Georgia Transmission Corporation           | IEEE/PES/<br>SUB                |
| Keith Harrison        | (Principal)            | KAMO Power Cooperative                     | NRECA                           |
| Robert D. Saint       | (Alternate)            | National Rural Electric Cooperative Assoc. | NRECA                           |
| Mark A. Konz          | (Principal)            | Gulf Power Company                         | SEEX                            |
| Christopher A. Carson | (Alternate)            | Georgia Power Company                      | SEEX                            |

**Subcommittee 4**  
**Overhead Lines—Clearances**  
**(Sections 20, 21, 22, and 23)**

**David G. Komassa, Chair**

**Eric K. Engdahl, Secretary**

| <b>Name</b>         | <b>Voting position</b> | <b>Employed by</b>  | <b>Organization represented</b> |
|---------------------|------------------------|---|---------------------------------|
| Charles C. Bleakley | (Principal)            | Retired   | AEIC                            |
| Keith Reese         | (Alternate)            | Georgia Power Company   | AEIC                            |
| Jan Howard          | (Principal)            | Owensboro Municipal Utilities   | APPA                            |
| Lawrence M. Slavin  | (Principal)            | Outside Plant Consulting Services, Inc.                               | ATIS                            |
| Trevor Bowmer       | (Principal)            | Telcordia   | ATIS                            |
| Dennis Henry        | (Alternate)            | Telcordia   | ATIS                            |
| Maggie Emery        | (Principal)            | Bonneville Power Administration                                       | BPA                             |
| Allen L. Clapp      | (Principal)            | Clapp Research Associates, P.C.                                       | Consultant                      |
| Donald E. Hooper    | (Principal)            | ES&C, Inc.  | Consultant                      |
| O. C. Amrhyn        | (Principal)            | OPEC  | Consultant                      |
| Rudolph J. Bednarz  | (Principal)            | JayCo Engineering, Inc.   | Consultant                      |
| David G. Komassa    | (Principal)            | We Energies   | EEI                             |
| Eric K. Engdahl     | (Principal)            | American Electric Power   | EEI                             |
| Kevin Drzewiecki    | (Principal)            | National Grid   | EEI                             |
| Mickey B. Gunter    | (Principal)            | Engineering Consultant  | EEI                             |
| Thomas R. Crowell   | (Principal)            | OH Distribution Design Engineer AIP<br>Public Service Co. of Oklahoma | EEI                             |
| Tracy Dencker       | (Alternate)            | Ameren  | EEI                             |
| Barrett Thomas      | (Alternate)            | American Electric Power   | EEI                             |
| Frank Tucker        | (Alternate)            | American Electric Power   | EEI                             |
| Alan Kuipers        | (Alternate)            | Consumer Energy   | EEI                             |
| Chris Ann Shellberg | (Alternate)            | Consumer Energy   | EEI                             |
| Gregory Obenchain   | (Alternate)            | Edison Electric Institute   | EEI                             |
| Jeffrey Steiner     | (Alternate)            | National Grid   | EEI                             |
| Jeffery Hall        | (Alternate)            | Florida Power and Light   | EEI                             |
| Alan T. Young       | (Principal)            | Verizon Network Services  | EIA                             |
| Mark Berlinger      | (Alternate)            | Verizon Network Services  | EIA                             |
| Joseph Renowden     |                        |   | Emeritus                        |
| James R. Tomaseski  | (Principal)            | IBEW  | IBEW                            |
| Marc Candels        | (Principal)            | Candels Consulting  | IEC                             |
| Robert G. Oswald    | (Principal)            | Power Engineers, Inc.   | IEE/PES/T&D                     |
| Mathew C. Schwarz   | (Principal)            | HDR Engineering, Inc.   | IEEE/IAS                        |
| Darren Gill         | (Principal)            | Pennsylvania Public Utility<br>Commission                             | NARUC                           |
| Christopher Austin  | (Principal)            | Time Warner Cable   | NCTA                            |
| Rex Bullinger       | (Alternate)            | National Cable Television Association                                 | NCTA                            |

| <b>Name</b>        | <b>Voting position</b> | <b>Employed by</b>                         | <b>Organization represented</b> |
|--------------------|------------------------|--|---------------------------------|
| Steve Mace         | (Alternate)            | National Cable & Telecommunication Assoc.  | NCTA                            |
| Ernest H. Neubauer | (Principal)            | Southern Rivers Energy                     | NRECA                           |
| Michael C. Pehosh  | (Alternate)            | National Rural Electric Cooperative Assoc. | NRECA                           |
| Charles Crawford   | (Principal)            | Oncor Electric Delivery                    | NSPE                            |
| David J. Marne     | (Principal)            | Marne and Associates, Inc.                 | NSPE                            |
| Donald Junta       | (Principal)            | Rural Utilities Service                    | RUS                             |
| Joseph J. White    | (Principal)            | KCI Technologies                           | SEEX                            |
| Donnie Trivitt     | (Alternate)            | OG&E Electric Services                     | SEEX                            |
| Branch Davis       | (Alternate)            | Entergy Corporation                        | SEEX                            |

**Subcommittee 5**  
**Overhead Lines—Strength and Loading**  
**(Sections 24, 25, and 27)**

**Frank A. Denbrock, *Chair***

**Allen L. Clapp, *Secretary***

| <b>Name</b>         | <b>Voting position</b> | <b>Employed by</b>                      | <b>Organization represented</b> |
|---------------------|------------------------|---|---------------------------------|
| John Busel          | (Principal)            | ACMA                                    | ACMA                            |
| Brian Lacoursiere   | (Alternate)            | RS Technologies                         | ACMA                            |
| Dustin Troutman     | (Alternate)            | Creative Pultrusions Inc.               | ACMA                            |
| Helen Chen          | (Principal)            | American Iron and Steel Institute       | AISI                            |
| Richard Aichinger   | (Alternate)            | Valmont-Newmark                         | AISI                            |
| Christopher Jones   | (Principal)            | Springfield City Utilities              | APPA                            |
| Joseph Rempe        | (Principal)            | Tacoma Power                            | APPA                            |
| Lawrence M. Slavin  | (Principal)            | Outside Plant Consulting Services, Inc. | ATIS                            |
| Nelson G. Bingel    | (Principal)            | Osiose Utilities Services, Inc.         | AWPA                            |
| Leon Kempner        | (Principal)            | Bonneville Power Administration         | BPA                             |
| Allen L. Clapp      | (Principal)            | Clapp Research Associates, P.C.         | Consultant                      |
| Bruce Freimark      | (Principal)            | American Electric Power                 | EEI                             |
| C. Jerry Wong       | (Principal)            | Florida Power & Light                   | EEI                             |
| Edward Harrel       | (Principal)            | Western Area Power Administration       | EEI                             |
| Jeffrey Erdle       | (Principal)            | Duke Energy                             | EEI                             |
| Richard J. Stanford | (Principal)            | National Grid                           | EEI                             |
| Robert O. Kluge     | (Principal)            | American Transmission Company           | EEI                             |
| Ronald Cotant       | (Principal)            | American Electric Power                 | EEI                             |
| John-Chung Ng       | (Alternate)            | American Electric Power                 | EEI                             |
| David West          | (Alternate)            | Duke Power Company                      | EEI                             |
| G. Paul Anundson    | (Alternate)            | National Grid                           | EEI                             |
| Bryan L. Williams   | (Alternate)            | Oncor                                   | EEI                             |

| <b>Name</b>           | <b>Voting position</b> | <b>Employed by</b>                             | <b>Organization represented</b> |
|-----------------------|------------------------|--|---------------------------------|
| Mark Berlinger        | (Principal)            | Verizon Network Services                       | EIA                             |
| Alan T. Young         | (Alternate)            | Verizon Network Services                       | EIA                             |
| Frank A. Denbrock     | (Principal)            | D&A Consulting Engineers                       | IEE/PES/T&D                     |
| Andrew Schwalm        | (Principal)            | Victor Insulators, Inc.                        | IEEE                            |
| Donald Soderberg, Jr. | (Principal)            | Consumers Energy                               | IEEE                            |
| Robert C. Peters      | (Principal)            | RCP Engineering                                | IEEE                            |
| Richard W. Hensel     | (Alternate)            | CMS Energy                                     | IEEE                            |
| Walter D. Jones       | (Principal)            | Stanley Consultants, Inc.                      | IEEE/IAS                        |
| Grant Glaus           | (Principal)            | Marne and Associates, Inc.                     | Marne and Assoc.                |
| Jacob Joplin          | (Principal)            | Carteret-Craven Electric Cooperative           | NCEMC                           |
| Rex Bullinger         | (Principal)            | National Cable Television Association          | NCTA                            |
| Steve Mace            | (Alternate)            | National Cable & Telecommunication Assoc.      | NCTA                            |
| Christopher Austin    | (Alternate)            | Time Warner Cable, NYC-Liberty Division        | NCTA                            |
| Jim Byrne             | (Principal)            | Poudre Valley Rural Electric Association, Inc. | NRECA                           |
| Michael C. Pehosh     | (Alternate)            | National Rural Electric Cooperative Assoc.     | NRECA                           |
| Robert S. Fuller      | (Principal)            | Texas-New Mexico Power Co.                     | NSPE                            |
| Otto J. Lynch         | (Principal)            | Power Line Systems, Inc.                       | Power Line Systems              |
| Thomas Haire          | (Principal)            | Rutherford EMC                                 | REMC                            |
| Donald G. Heald       | (Principal)            | RUS-U.S. Dept. of Agriculture                  | RUS                             |
| Robert Lash           | (Alternate)            | Rural Utilities Services                       | RUS                             |
| Timothy Cooke         | (Principal)            | Times Fiber Communications, Inc.               | SCTE                            |
| Ron Corzine           | (Principal)            | Georgia Power                                  | SEEX                            |
| Wade Shultz           | (Principal)            | Alabama Power Company                          | SEEX                            |
| Frank Agnew           | (Alternate)            | Alabama Power Company                          | SEEX                            |
| Russell Guerry        | (Alternate)            | Edgecombe-Martin County EMC                    | SEEX                            |
| Clayton L. Clem       | (Principal)            | TVA Power System Operations                    | TVA                             |
| Douglas Hanson        | (Principal)            | Western Area Power Administration              | WAPA                            |
| Terry Burley          | (Alternate)            | Western Area Power Administration              | WAPA                            |

## Subcommittee 7 Underground Lines (Sections 30–39)

Charles C. Bleakley, *Chair*

John C. Spence, *Secretary*

| Name                | Voting position | Employed by                                | Organization represented |
|---------------------|-----------------|--|--------------------------|
| Michael Dyer        | (Principal)     | Salt River Project                         | APPA                     |
| George S. Pristach  | (Principal)     | Parsons Brinckerhoff                       | APTA                     |
| Lawrence M. Slavin  | (Principal)     | Outside Plant Consulting Services, Inc.    | ATIS                     |
| Trevor Bowmer       | (Principal)     | Telcordia                                  | ATIS                     |
| Dennis Henry        | (Alternate)     | Telcordia                                  | ATIS                     |
| James D. Mars       | (Principal)     | Genesis Engineering, Inc.                  | Consultant               |
| O. C. Amrhyn        | (Principal)     | OPEC                                       | Consultant               |
| Dennis B. Miller    | (Principal)     | Exelon Energy Delivery                     | EEI                      |
| John C. Spence      | (Principal)     | Baltimore Gas & Electric Co.               | EEI                      |
| Lauren E. Gaunt     | (Principal)     | Northeast Utilities                        | EEI                      |
| Donald Guinn        | (Alternate)     | Progress Energy                            | EEI                      |
| Gregory Obenchain   | (Alternate)     | Edison Electric Institute                  | EEI                      |
| Jonathan Gonyrnor   | (Alternate)     | National Grid                              | EEI                      |
| Katie Croteau       | (Alternate)     | National Grid                              | EEI                      |
| Raymond Pregler     | (Alternate)     | American Electric Power                    | EEI                      |
| John Korman         | (Principal)     | Verizon Network Services                   | EIA                      |
| Percy E. Pool       | (Alternate)     | Verizon Network Services                   | EIA                      |
| James R. Tomaseski  | (Principal)     | IBEW                                       | IBEW                     |
| James Cowan         | (Principal)     | Wakker Engineering                         | IEC                      |
| Ewell T. Robeson    | (Principal)     | Progress Energy                            | IEEE                     |
| Richard S. Vencus   | (Principal)     | Northeast Utilities                        | IEEE                     |
| Christopher Austin  | (Principal)     | Time Warner Cable, NYC-Liberty             | NCTA                     |
| Rex Bulinger        | (Alternate)     | National Cable Television Association      | NCTA                     |
| Steve Mace          | (Alternate)     | National Cable & Telecommunication         | NCTA                     |
| Monte Szendre       | (Principal)     | Wilson Construction Company Inc.           | NECA                     |
| Michael C. Pehosh   | (Principal)     | National Rural Electric Cooperative Assoc. | NRECA                    |
| Robert D. Saint     | (Alternate)     | National Rural Electric Cooperative Assoc. | NRECA                    |
| Trung Hiu           | (Principal)     | Rural Development-Electric Program         | RUS                      |
| Timothy Cooke       | (Principal)     | Times Fiber Communications, Inc.           | SCTE                     |
| Charles C. Bleakley | (Principal)     | Retired                                    | SEEX                     |
| Mickey B. Gunter    | (Principal)     | Engineering Consultant                     | SEEX                     |
| Michael Kosinski    | (Alternate)     | Appalachian Power Company                  | SEEX                     |

## Subcommittee 8

### Work Rules

#### (Sections 40–44)

**James R. Tomaseski, Chair**

**Samuel Stonerock, Secretary**

| <b>Name</b>          | <b>Voting position</b> | <b>Employed by</b>                         | <b>Organization represented</b> |
|----------------------|------------------------|--|---------------------------------|
| Greg Herbinger       | (Principal)            | Alabama Power Company                      | AEIC                            |
| William C. Weintritt | (Alternate)            | Gulf Power Company                         | AEIC                            |
| Brent McKinney       | (Principal)            | City Utilities of Springfield              | APPA                            |
| Kevin Dody           | (Alternate)            | City Utilities of Springfield              | APPA                            |
| Wayne Blackley       | (Principal)            | Associated Training Corporation            | ATC                             |
| Dennis Henry         | (Alternate)            | Telcordia                                  | ATIS                            |
| Trevor Bowmer        | (Alternate)            | Telcordia                                  | ATIS                            |
| Charles W. Grose     | (Principal)            | Consultant                                 | Consultant                      |
| J. Frederick Doering | (Principal)            | J. F. Doering Associates                   | Consultant                      |
| Tommy Russell        | (Principal)            | American Electric Power                    | EEI                             |
| Michael Granata      | (Principal)            | AEP  | EEI                             |
| Samuel Stonerock     | (Principal)            | Southern California Edison Co.             | EEI                             |
| Alan Kuipers         | (Alternate)            | Consumer Energy                            | EEI                             |
| Thuy Nguyen          | (Alternate)            | American Electric Power                    | EEI                             |
| Patrick Geoffrey     | (Alternate)            | PG&E                                       | EEI                             |
| Larry Nash           | (Alternate)            | Dominion Virginia Power                    | EEI                             |
| George Kerstetter    | (Principal)            | Verizon                                    | EIA                             |
| John Korman          | (Alternate)            | Verizon                                    | EIA                             |
| James R. Tomaseski   | (Principal)            | IBEW                                       | IBEW                            |
| Charles Woodings     | (Principal)            | Anderson & Wood Constructions Co. Inc.     | IEC                             |
| James C. Tuggle      | (Alternate)            | Malpasco Group Inc.                        | IEC                             |
| Robert W. Baird      | (Alternate)            | IEC  | IEC                             |
| Lawrence Schweitzer  | (Principal)            | InfraSource Power                          | IEEE/PES/<br>T&D                |
| Thomas Verdecchio    | (Principal)            | PSE&G                                      | IEEE/PES/<br>T&D                |
| Stephen Poholski     | (Principal)            | Newkirk Electric                           | NECA                            |
| Kenneth Brubaker     | (Principal)            | National Rural Electric Cooperative Assoc. | NRECA                           |
| Mark Zavislan        | (Alternate)            | Ohio Rural Electric Cooperatives, Inc.     | NRECA                           |
| Albert Smoak         | (Principal)            | Southwestern Electric Power Company        | NSPE                            |
| F. M. Brooks         | (Principal)            | Brooks & Jackson, Inc.                     | NSPE                            |
| Steven Theis         | (Principal)            | MYR Group, Inc.                            | NUCA                            |
| Brian Erga           | (Principal)            | ESCI Inc.                                  | NWPPA                           |
| David M. Wallis      | (Principal)            | OSHA Office of Engineering Safety          | OSHA                            |
| Charles Shaw         | (Principal)            | Alabama Power Company                      | SEEX                            |

| <b>Name</b>  | <b>Voting position</b> | <b>Employed by</b> | <b>Organization represented</b> |
|--------------|------------------------|--------------------|---------------------------------|
| Bruce Gurley | (Principal)            | Duke Energy        | SEEX                            |
| Edward Hunt  | (Principal)            | WAPA               | WAPA                            |
| Jeffrey Wild | (Alternate)            | WAPA               | WAPA                            |

### **Executive Subcommittee**

**Michael J. Hyland, *Chair***

**James R. Tomaseki, *Vice Chair***

| <b>Name</b>        | <b>Employed by</b>                      | <b>Organization represented</b> |
|--------------------|---|---------------------------------|
| Ewell T. Robeson   | Outside Plant Consulting Services, Inc. | EEI                             |
| Frank A. Denbrock  | D&A Consulting Engineers                | IEEE                            |
| James R. Tomaseski | IBEW                                    | IBEW                            |
| Leon Kempner       | Progress Energy                         | BPA                             |
| Lawrence M. Slavin | Outside Plant Consulting Services, Inc. | ATIS                            |
| Michael J. Hyland  | American Public Power Assoc.            | APPA                            |
| O. C. Amrhyn       | OPEC                                    | Consultant                      |

### **Interpretations Subcommittee**

**Donald E. Hooper, *Chair***

| <b>Name</b>            | <b>Employed by</b>                  | <b>Part</b> | <b>Section</b> |
|------------------------|-------------------------------------|-------------|----------------|
| O. C. Amrhym           | OPEC                                | A           |                |
| Rudolph J. Bednarz     | JayCo Engineering, Inc.             | A           |                |
| Charles C. Bleakley    | Retired                             | A           |                |
| D. J. Christofersen    | CeCe                                | 1           |                |
| Allen L. Clapp         | Clapp Research Associates, P.C.     | A           |                |
| Alton L. Comans        | Alabama Power Company               | 1           | 9              |
| John B. Dagenhart      | Clapp Research Associates, P.C.     | 2           | 9              |
| O. L. Davis            | Manzano-Western Incorporated        | 3           |                |
| Frank A. Denbrock      | D&A Consulting Engineers            | A           |                |
| Eric K. Engdahl        | American Electric Power             | A           |                |
| Gary R. Engmann        | Burns and McDonnell Engineering     | 1           |                |
| Bruce Freimark         | American Electric Power             | 2           |                |
| Charles W. Grose       | Consultant                          | 4           |                |
| Mickey B. Gunter       | Retired                             | A           |                |
| Donald E. Hooper       | ES&C, Inc.                          | A           |                |
| Herman N. Johnson, Jr. | Shaw Energy Delivery Services, Inc. | A           |                |
| Robert G. Oswald       | Power Engineers, Inc.               | 2           |                |
| Percy E. Pool          | Verizon Network Services            | 3           | 9              |

| <b>Name</b>        | <b>Employed by</b> | <b>Part</b> | <b>Section</b> |
|--------------------|--------------------|-------------|----------------|
| Ewell T. Robeson   | Progress Energy    | 3           | 9              |
| Wayne B. Roelle    | Consultant         | 2           |                |
| Lanny L. Smith     | Consultant         | A           |                |
| James R. Tomaseski | IBEW               | A           |                |

A = All areas, P1 = Part 1, P2 = Part 2, P3 = Part 3, P4 = Part 4, S9 = Section 9 Grounding  
When a member has S9 and a Part number, they cover grounding and grounding for that part.

|  |  |
|--|--|
| AAR—Association of American Railroads                          | NCEMC—North Carolina Electric Membership Cooperative         |
| ACMA—American Composites Manufacturers Association             | NCTA—National Cable Television Association                   |
| AEIC—Association of Edison Illuminating Companies              | NECA—National Electrical Contractors Association             |
| AISI—American Iron and Steel Institute                         | NEMA—National Electrical Manufacturers Association           |
| APPA—American Public Power Association                         | NRECA—National Rural Electric Cooperative Association        |
| APTA—American Public Transit Association                       | NSC—National Safety Council                                  |
| ATIS—Alliance for Telephone Industry Solutions                 | NSPE—National Society of Professional Engineers              |
| AWPA—American Wood Preserves Association                       | OHSA—Occupational Safety and Health Administration           |
| BPA—Bonneville Power Admin., U.S. Dept. of Energy              | REMC—Rutherford Electric Membership Corporation              |
| EEI—Edison Electric Institute                                  | RUS—Rural Utilities Services, U.S. Dept. of Agriculture      |
| EIA—Electronic Industries Association                          | SCTE—Society of Telecommunication Engineers                  |
| IBEW—International Brotherhood of Electrical Workers           | SEEX—Southeastern Electric Exchange                          |
| IEC—Independent Electrical Contractors                         | TVA—Tennessee Valley Authority                               |
| IEEE—Institute of Electrical and Electronics Engineers, Inc.   | WAPA—Western Area Power Administration, U.S. Dept. of Energy |
| IMSA—International Municipal Signal Association                |  |
| NARUC—National Association of Regulatory Utility Commissioners |  |

Lisa Perry  
Coordinating Program Manager  
IEEE Standards



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