

1907/000 OF THE SECRETARY
7-17 A.D. 03

**LOG OF MEETING
DIRECTORATE FOR ENGINEERING SCIENCES**

SUBJECT: *National Electrical Code, Code-Making Panel 2 Meetings to discuss comments to revise Articles 210, 215, and 220.*

DATE OF MEETING: December 1-3, 2003

PLACE OF MEETING: Double Tree Hotel, Mission Valley, San Diego, CA

LOG ENTRY SOURCE: Doug Lee, ESEE *DL*

DATE OF LOG ENTRY: December 12, 2003

COMMISSION ATTENDEES: Doug Lee, ESEE

NON-COMMISSION ATTENDEES:

Ken Mastrullo, National Fire Protection Association (NFPA)

Panel Members

Ray Webber, Panel 2 Chair, International Association of Electrical Inspectors (IAEI)

Richard Wagner, Underwriters Laboratories (UL)

Susan Porter, UL

Michael Toman, National Electrical Contractors Association (NECA)

Don King, Int'l Brotherhood of Electrical Workers (IBEW)

Kevin Brooks, IBEW

Jim Pauley, National Electrical. Mfrs. Assoc. (NEMA)

Dan Kissane, NEMA

Dick Becker, Institute of Electrical & Electronics Engineers (IEEE)

Albert Sidhom, US Army

Robert Wilkinson, Independent Electrical Contractors (IEC)

Cliff Rediger, IEC

Thomas Harman, University of Houston

Pat Roche, American Chemistry Council (ACC)

Brian Nenninger, ACC

Christopher O'Neal, Edison Electric Institute (EEI)

Matt Dobson, National Association of Home Builders (NAHB)

Frank Coluccio, New York City Department of Buildings

Guests

Steve Campolo, Leviton

George Gregory, Square D

Joe Engel, Eaton/Cutler-Hammer

John Young, Siemens

Clive Kimblin, Eaton/Cutler-Hammer

John Wafer, Eaton/Cutler-Hammer

Jack Wells, Pass & Seymour Legrand

CPSA 50X(1) CLEARED BY PUBLIC 12-18-03

NO MFRS/PRVTLBLS OR PRODUCTS IDENTIFIED *DL*

— EXCEPTED BY: PETITION
RULEMAKING ADMIN. PRCDG

— WITH PORTIONS REMOVED: _____

Dave Dini, UL
Aaron Chase, Leviton
Zeus Reynolds, Texas Instruments
Joe Ross, Ross Seminars
And other guests

SUMMARY OF MEETING:

Mr. Lee participated in discussions of comments received by the NFPA on proposals to revise the 2002 edition of the *National Electrical Code (NEC)* for Articles 210, 215, and 220. The new edition will be known as the 2005 edition. The topics covered included branch-circuits, feeders, and branch-circuit, feeder, and service calculations. The CPSC technical staff submitted five comments on proposals that were reviewed by Code-Making Panel 2 (Panel 2). The two major issues for Panel 2 were ground-fault circuit interrupters (GFCIs) and arc-fault circuit interrupters (AFCIs).

The CPSC staff comment on a CPSC proposal (comment 2-21, proposal 2-47) to add GFCI protection for hard-wired boat hoists was "accepted in principle" for 120 V branch circuits at dwellings. The *NEC* presently requires GFCI protection for dwelling unit outdoor receptacles and boathouses. CPSC staff discussed that a hard-wired boat hoist is exposed to a harsh environment that needs the extra protection of a GFCI. Previous substantiation for earlier versions of the *NEC* included 3 deaths from boat hoists.

The CPSC staff comment on a CPSC proposal (comment 2-29, proposal 2-47) to add GFCI protection to additional branch circuits that are now unprotected by a GFCI in a dwelling unit received additional support (from ROP stage). The comment was "accepted in principle" by a simple majority but is short of the 2/3rds required for acceptance of the requirement. The CPSC substantiation on this comment was instrumental in receiving a unanimous vote for accepting a comment and proposal (comment 2-38, proposal 2-42) to add GFCI protection for dwelling laundry sinks, which are considered to be a more hazardous location for ground-faults.

Panel 2 actions on other comments continued to support an earlier CPSC proposal (2-70) that would require GFCI protection at other than dwelling units - outdoor public spaces that are accessible to the public.

The other major issue for discussion was the new requirement for AFCIs developed at the ROP meeting. Panel 2 addressed CPSC staff's comment (2-80) and concerns, that the combination device should not be required at this time since most of the field experience is with the branch-feeder type device, by delaying the effective date for the combination devices. Panel 2 reconfirmed their position of wanting a combination device but delayed the effective date until January 1, 2008. The panel 2 position would allow Branch/Feeder AFCIs until this date. Panel 2's position on receptacle location with the use of metal conduit and smoke alarms on AFCI protected circuits did not change from the ROP stage. Receptacle devices would be allowed if installed as the first receptacle in the circuit, within 6 ft. of the origin, and using metal conduit to the first receptacle. Smoke alarms that are installed in bedroom outlets would require AFCI

protection. The panel did not receive substantiation that indicated that smoke alarms were incompatible with AFCIs.

One of the CPSC staff comments on the CPSC proposal (comment 2-82, proposal 2-124) that would require AFCIs for protection of lighting and appliance circuits on older homes when the panel board is replaced was "accepted in principle" and received substantial additional support (from ROP stage). The hand vote is only one vote short of the 2/3rds required for acceptance. Some of the negative and abstaining positions were due to some panel members wanting to wait for the development of the combination device. The CPSC staff believes that the current device has proven field reliable and will add substantial fire reduction capabilities.

The CPSC staff comment on a CPSC proposal (comment 2-98, proposal 2-124) that would require AFCIs for protection of only bedroom outlets on older homes when the panel board is replaced was "accepted in principle" and received support by a simple majority. Although comment 2-82 would require AFCI protection of more circuits than comment 2-98, comment 2-82 received more support by the panel. The written balloting should explain the positions.

Code-Making Panel 2 discussed and acted upon 183 comments on proposals. The comments on proposals are included in the "National Electrical Code Committee Report on Comments", published by NFPA for the 2004 May Association Meeting. Ballots during the meeting are provisional until the final balloting is conducted by mail. Details of the disposition of the 183 comments and proposals will be published subsequently by the NFPA in the 2005 *NEC*. The CPSC staff is a non-voting member of the *NEC* Code-Making Panel 2.