

Form for Proposals on NFPA National Electrical Code

NFPA Document and Reference: **NFPA 70**

Section 230-XX in Part E (new)

SUBMITTER INFORMATION:

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Commission staff
Please indicate organization represented (if any) Date: 09/07/1999

FOR EACH PROPOSAL, PLEASE COMPLETE EACH OF THE FOLLOWING:

- 1.a) Document Title: **National Electrical Code** NFPA No.: **70** Year: **1999**
b) Article/Section: Section 230-XX in Part E
(new)
2. Proposal recommends: (Check one): new text revised text deleted text
3. Proposal (include proposed new or revised wording, or identification of wording to be deleted):
Add new Section 230-XX as follows:
230-XX. Replacement of Service Equipment in Dwelling Units.
When service equipment in dwelling units is replaced, each existing 125-volt, single-phase, 15- and 20-ampere lighting and appliance branch circuit shall be individually protected by an arc-fault circuit interrupter.
FPN: See Section 210-12(c). (Editorial note: Section 210-12(c) is a proposed new paragraph, submitted separately to the CMP for Article 210, to complement this proposed new Section 230-XX. For information purposes, proposed new Section 210-12(c) reads as follows: Lighting and Appliance Branch Circuits. Each existing 125-volt, single-phase, 15- and 20-ampere lighting and appliance branch circuit shall be individually protected by an arc-fault circuit-interrupter when the service equipment is replaced.)
4. Statement of Problem and Substantiation for Proposal:
According to a study conducted by the U.S. Consumer Product Safety Commission (CPSC),
"Residential Electrical Distribution System Fires", Smith & McCoskrie, 1987, fires originating in branch circuit wiring predominately occurred in dwellings over 20 years old, with the highest rates of fires occurring in dwellings over 40 years old. Older dwellings are frequently upgraded with replacement service equipment to accomodate an increase in the service rating to supply additional appliance and equipment loads. However, often times, the existing lighting and appliance branch circuits in dwelling units are not replaced when the service is upgraded, due to the increased cost, and/or the inability to evaluate the remaining life expectancy of the branch circuit conductors. The branch circuit conductors are frequently located in concealed spaces surrounded with thermal insulation, and may be in a deteriorated condition at the time the service is upgraded. This proposal is intended to remedy this situation with the addition of arc-fault circuit interruption (AFCI) protection against fire hazard conditions for the existing branch circuit conductors. ✓
5. This Proposal is original material.
 This Proposal is not original material; its source (if known) is as follows: