

FORM FOR PROPOSAL FOR 2014 NATIONAL ELECTRICAL CODE®

INSTRUCTIONS — PLEASE READ CAREFULLY

Type or print **legibly** in **black ink**. Use a separate copy for each proposal. Limit each proposal to a **SINGLE** section. All proposals **must be received by NFPA by 5 p.m., EST, Friday, November 4, 2011**, to be considered for the 2014 National Electrical Code. Proposals received after 5:00 p.m., EST, Friday, November 4, 2011, will be returned to the submitter. If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee.

For technical assistance, please call NFPA at 1-800-344-3555.

FOR OFFICE USE ONLY

Log #: _____

Date Rec'd: _____

Please indicate in which format you wish to receive your ROP/ROC ☒ electronic ☐ paper ☐ download
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date 2 Nov 2011 Name John C. Wiles, Jr Tel. No. 575-646-6105
Company Southwest Technology Development Institute, New Mexico State University Email jwiles@nmsu.edu
Street Address 3705 RESEARCH DR/MSC 3 SOL City LAS CRUCES State NM Zip 88003

*****If you wish to receive a hard copy, a street address *MUST* be provided. Deliveries cannot be made to PO boxes.**

Please indicate organization represented (if any) PV INDUSTRY FORUM

1. Section/Paragraph 690.71(H)

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): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Add the following section H to 690.71

(H) Disconnects and Overcurrent Protection. Where energy storage device input and output terminals are more than 1.5 meters (5 feet) from connected equipment, or where the circuits from these terminals pass through a wall or partition the installation shall comply with (1) through (4):

- (1) A disconnecting means and overcurrent protection shall be provided at the energy storage device end of the circuit. Fused disconnecting means or circuit breakers are acceptable.
- (2) Where fused disconnecting means are used, the "Line" terminals of the disconnecting means shall be connected toward the energy storage device terminals.
- (3) Overcurrent devices or disconnecting means shall not be installed in energy storage device enclosures where explosive atmospheres can exist.
- (4) A second disconnecting means located at the connected equipment shall be installed where the disconnecting means required by (1) is not within sight of the connected equipment.
- (5) Where the energy storage device disconnecting means is not within sight of the PV system ac and dc disconnecting means, placards or directories shall be installed at the locations of all disconnecting means indicating the location of all disconnecting means.

4. **Statement of Problem and Substantiation for Proposal:** (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

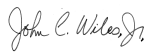
Batteries and other energy storage devices represent significant sources of short-circuit current (10,000 amps or more), and circuits connected to these sources must be protected with overcurrent devices. Circuits are bidirectional and confusion exists as to where the disconnects and overcurrent protection are required since there are two supply sources. Operating voltages for residential systems are under development that operate above 300 volts dc. A switched disconnecting means is required to allow rapid disconnection of the batteries from the circuit under connected equipment failure and during maintenance. It is difficult to install this equipment when the cable lengths are shorter than about five feet, and this is the distance that Underwriters Laboratories (UL) generally allows for unprotected cable lengths when testing PV power centers. Any penetration of a wall or partition necessitates the installation of a disconnecting means and overcurrent protection at the battery end of the circuit to protect the circuit as it passes through the wall and to allow the battery to be disconnected at the source. Overcurrent protection is generally required at the battery or energy storage device end of the circuit since this is the source of the highest continuous currents and the source of the highest fault currents in the circuit. Where a wall is involved, disconnects are required at each end of the circuit.

5. Copyright Assignment

- (a) ☒ I am the author of the text or other material (such as illustrations, graphs) proposed in the Proposal.
- (b) ☐ Some or all of the text or other material proposed in this Proposal was not authored by me. Its source is as follows: (please identify which material and provide complete information on its source)

I hereby grant and assign to the NFPA all and full rights in copyright in this Proposal and understand that I acquire no rights in any publication of NFPA in which this Proposal in this or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Proposal and that I have full power and authority to enter into this assignment.

Signature (Required)



PLEASE USE SEPARATE FORM FOR EACH PROPOSAL

Mail to: Secretary, Standards Council · National Fire Protection Association
1 Batterymarch Park · Quincy, MA 02169-7471 OR
Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org 8/5/2010