



# ELECTRICAL CODE UPDATE COMMITTEE MEETING

Minutes for the May 15, 2024 Meeting

## MEETING DETAILS

**Date:** May 15, 2024

**Time:** 9:00am

**Location:** Indiana Government Center South, Conference Room A

## Member Attendance

Name	Present		Means of Participation
	Yes	No	
Stephen Culbert	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Charlie Eldridge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Randy Gulley	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
John Jackson III	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
John Lupacchino	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Lynn Madden	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Paul Meyers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Mike Patarino	<input type="checkbox"/>	<input type="checkbox"/>	NA
Michael Popich	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person
Rod West	<input checked="" type="checkbox"/>	<input type="checkbox"/>	In Person

### 1. Call to Order

Chairman Popich called the meeting to order at 9:01am.

### 2. Roll Call

Roll call was taken. Mr. Meyers and Mr. Jackson joined shortly after. Quorum met.

### 3. Review April Meeting Minutes

March minutes were not available at previous meeting. Saved until next meeting. April minutes need the following corrections: title changed to meeting minutes. Mr. Eldridge sought clarification on whether 90.6 Formal Interpretations (proposal was withdrawn by proponent) was replaced by 22-13-5. Chairman Popich clarified that 90.6 was kept, replacing the text with “See Ind. Code 22-13-5.” Committee **accepted** the minutes with the suggested corrections.

### 4. Review Code Change Proposals

- a. **355 – 90.2 (D)(2)(5) – Scope** – Charlie Eldridge. Energy storage left out of accepted proposal. Energy storage needs to be inserted, included in the model code for the 2023. 2023 HEA 1173 adopted NFPA 855 to cover BESS systems, granted IDHS and FPBSC authority over such systems. Proposal 254 and 255 would potentially need to be reopened to accommodate. Public comment was presented that 855 has a pointer back to NFPA 70, so including BESS systems under installations not covered could create issues. Motion was made to **re-open** proposal 255. Language from 355 **added** to proposal 255. Mr. Culbert asked for clarification on whether this would apply to only batteries or any sort of energy storage at a utility scale, as proposal only says ‘energy storage’. Mr. Guedel pointed out HEA 1173 only applies to utility-scale battery energy storage. 355 **withdrawn**.
- b. **171 – 110.26 (E)(1)(a) – Dedicated Electrical Space** – Charlie Eldridge. Heard in March. Removed second exception. **Withdrawn**.
- c. **361 – 210.8 – Ground-Fault Circuit-Interrupter Protection for Personnel** – Proponent requested that proposal be tabled. **Tabled** 8-1.
- d. **362 – 210.8 (A)(5) – Dwelling Units** – Lynn Madden presented. Unrelated to 361. Not all basements subject to damp or wet conditions. Extending GFCI protection to places where water is not expected is unjustified. Mr. Meyers pointed out that the idea is that all basements be dry but not always the case, opposes the removal of GFCI protections. Mr. West also opposed the motion, as basements are below-grade by definition and has a higher probability that water escaping from anywhere in the home will make its way to the basement. Mr. Eldridge notes that current Residential Code E902.5 and current Indiana Electrical Code allows for GFCI omission. Mr. Popich notes that current electrical code only applies to unfinished basements not intended as habitable rooms. Public comment was made that a finished basement can essentially be finished concrete, which does not negate the water hazards. Finished basements also typically have sump pumps, making it a traditionally damp location. 210.8 parent language refers to receptacles, so additional receptacle language unnecessary. Mr. Popich asked whether omission of language “limited to storage areas...” was an inadvertent omission, and notes that ‘finished’ is not a defined term. No fiscal impact if proposal is adopted as it maintains the current standard. Mr. West questioned why the committee was not attempting to align current codes. Ms. Madden answered the codes have never aligned.

**Proposed Amendments:** add ‘s’ to basement, remove the word receptacles.

Committee took a break from 10:10 to 10:20 without taking action on current proposal.

Committee reconvened at 10:20, continued proposal after time for Ms. Madden to consider proposal. **Approved as amended.**

- e. **265 – 210.12 (E) – Branch Circuit Wiring Extension, Modifications, or Replacements** – Was tabled in April. Significant cost avoidance that was not listed. Proponent hopes to provide additional information on cost avoidance before the vote. **Tabled.**
- f. **305 – 215.18 (A) – Surge Protection Device** – **Tabled without discussion.**
- g. **236 – 215.18 (A) (1) – Surge-Protective Device** – **Tabled without discussion.**
- h. **190 – 215.18 (D) – 215.18 (D) – Surge Protection Replacement** – Charlie Eldridge. Does not conflict with proposal 236. Tabled in March to find fiscal impact, cost savings. Committee made a note that all proposals must include a fiscal impact by the proponent, not the Committee, and tabling month to month is ineffective. Robust discussion was had on fiscal impact calculation and a reasonably effective method of approaching a true estimate. 1% of apartments and class 2 structures is approximately 360 structures this would affect a year, at \$225 is a cost avoidance of \$81,000. **Approved as amended. 7-2.**
- i. **306 – 225.42 (A) – Surge Protection Device** – **Tabled without discussion.**
- j. **237 – 225.42 (A)(1) – Surge-Protective Device** – **Tabled without discussion.**
- k. **173 – 225.42 (D) – Surge Protection Replacement** – Amended to add cost savings of \$81,000, per proposal 190. **Approved as amended. 7-2.**
- l. **307 – 230.67 (A) – Surge Protection Device** – **Tabled without discussion.**
- m. **239 – 230.67 (A)(1) – Surge-Protective Device** – **Tabled without discussion.**
- n. **312 – 230.67 (D) – Surge Protection Replacement** – **Tabled without discussion.**
- o. **334 – 240.81 – Indicating (Resubmitted)** – Robust discussion was had regarding Canadian standards and comments from various electrical experts regarding the UL-67 standard. Motion to approve **failed 2-7**. Proposal **denied 7-2**.
- p. **340 – 240.81 – Indicating, Informational Note if Exception is Approved** – **Withdrawn.**
- q. **289 – 250.110 – Equipment Fastened in Place (Fixed) or Connected by Permanent Wiring Methods** – Permits local AHJ to approve alternate installation without a variance from the FPBSC. **Approved.**

- r. 288 – 250.114 – Equipment Connected by Cord and Plug – Permits local AJH to permit installation without a variance from the FPBSC. **Approved.**
- s. **301 – 300.3 (D) – Conductors** – Brought forward from previous electrical code, also required in Indiana Residential Code G2411.2.6. **Approved.**
- t. **316 – Table 310.4 (1) – Conductor Application and Insulations Rated 600 Volts** – Mr. Eldridge notes that PILC (paper insulated lead coated) cable is used in old underground installations in Indianapolis and that installation takes an extremely skilled person to do it correctly. **Withdrawn.**
- u. **317 – 310.15 (C)(1)(e) – Adjustment Factors, More than Three Current-Carrying Conductors** – 3705.3 in the IRC, Exception #5. Added by Indiana Amendment. Public comment was made as to why you would want to add additional heat to the holes. Mr. Eldridge commented that it would be difficult to overload the circuit with over-circuit protection and current insulation, so temperature rise that would overload the cables and cause damage is unlikely. Mr. Meyers asked for the fiscal impact of this proposal. Mr. Popich noted that lumber has a significant cost, and some builders are using engineered lumber with pre-drilled holes for mechanical and electrical. Robust discussion was had on whether this exception was truly necessary given the existing variances already allowed and where this would actually apply. Motion to approve failed 4-5. **Denied 5-4.** Fiscal impact probably negligible, as this only requires calculation to prove installation is safe and IRC allows for alternate installation.
- v. **318 – 314.16 (B)(2) – Box Fill Calculations – Clamp Fill – Approved.** More of a clarification.
- w. **290 – 372.20 – Size of Conductors** – Changing ‘by special permission’ to ‘where approved’. **Approved.**
- x. **291 – 374.20 – Size of Conductors** – Changing ‘by special permission’ to ‘where approved’. **Approved.**
- y. **308 – 406.12 – Tamper-Resistant Receptacles** – **Tabled** without discussion.

Committee went to lunch from 12:08 to 1:00.

- z. **335 – 422.5 (A) – General** – Concerns about putting a GFCI on a sump pump or freezer. Alarms for such devices when the circuit fails are relatively inexpensive. No change to requirements, adding informational notes. **Approved.**
- aa. **292 – 425.10 (B) – Fixed Resistance and Electrode Industrial Process Heating Equipment** – Changing ‘by special permission’ to ‘where approved’. **Withdrawn.**
- bb. **294 – 430.111 (B)(3) – Oil Switch** – **Approved.**

- cc. **293 – 430.22 (E) – Other Than Continuous Duty** – Robust discussion was had on whether this should be a decision for the local jurisdiction or something that should go to the Commission. **Amendment:** After ‘unless’, “special permission is granted for conductors of lower ampacity.” **Approved as amended.**
- dd. **319 – 500.8 – Equipment, (E) Threading** – May prevent accidents, gives local AHJ an easy reference if needed. Mr. Meyers notes that the addition of conduit nipples can create confusion due to the way the definition is used throughout the code. **Amendment:** take out ‘conduit nipples’. No fiscal impact since it’s something that they should already be doing, informational note that reinforces the idea that this is prohibited. **Approved as amended.**
- ee. **177 – 501.15 – Sealing and Drainage** – Errata from NEC first printing. **Approved.**
- ff. **320 – 505.9 – Equipment, (E) Threading** – Same as 319, amend to remove conduit nipples. **Approved as amended.**
- gg. **178 – 513.7 – Wiring and Equipment Not Installed in Class 1 Locations** – Errata from first printing. **Approved.**
- hh. **179 – 513.10 – Special Equipment** – Errata from first printing. **Approved.**
- ii. **180 – 517.71 – Connection to Supply Circuit** – Errata from first printing. **Approved.**
- jj. **321 – 547.1 – Scope** – Forwarded from 2009 IEC. Discussion was had on whether this would apply to certain agricultural buildings, and if not whether the discussion was necessary. Mr. Culbert noted that, as written, article is not enforceable in Indiana. Mr. Jackson notes that this may change, and removal of the chapter would leave a gap. **Tabled** until legal counsel can review and provide guidance.
- kk. **181 – 550.18 – Calculations** – Errata. **Approved.**
- ll. **322 – 600.1 – Scope** – Clarification on what signs are covered. **Approved.**
- Commission took a break from 2:15 to 2:25.**
- mm. **295 – 600.3 – Listing** – Another ‘special permission’. **Approved.**
- nn. **297 – 620.37 (C)(1) – Wiring in Hoistways, Machine Rooms, Control Rooms, Machinery Spaces, and Control Spaces** – **Withdrawn.**
- oo. **185 – 352.40 – Electric Vehicle Branch Circuit** – **Withdrawn** as code language from 2020 matches 2023.
- pp. **324 – 680.26 (B)(1) – Conductive Pool Shells** – Forwarded from 2009 IEC. Public comment was submitted that 14 months ago, standards council proposed tentative interim amendments

that extensively change equal potential bonding requirements for swimming pools. Some states have adopted entirely, some states are still reviewing TIA. Public suggested continuing to review as TIA language has been uploaded in NPFA link and new printed version vs printed version. Mr. Meyers notes that Indiana adopts a specific printing of the code, so a proposal would need to be written to specifically add the code language to be changed. TIA 1687. **Tabled.**

qq. 325 – 680.26 (B)(2) – Perimeter Surfaces – **Tabled** with 324.

rr. 188 – 695.4 (B)(3) – Disconnecting Means Supervision – Errata. **Approved.**

ss. 182 – 701.12 (I) – Battery-Equipped Emergency Luminaires, Used for Legally Required Standby Systems – Errata. **Approved.**

tt. 166 – 702.4 – Capacity and Rating – Errata. **Approved.**

uu. 170 – 706.7 (C) – Regulation of Utility Scale Battery Energy Storage Systems (BESS) – **Tabled** until legal counsel can weigh in on DHS vs FPBSC authority.

vv. 167 and 174 – Informative Annex C – Correction of page numbers from errata. **Approved.**

## 5. Other committee business.

Determination of additional meeting schedule. Room scheduled for Friday, June 21<sup>st</sup>. Discussion was had about skipping June meeting and moving to July in order to give Committee members time to compare 2009 to 2023. Commission decided to forego June meeting in favor of July meeting. Mr. Jackson agreed to take Article 90 and 1. Mr. Meyers and Mr. Lupacchino agreed to take Chapter 2. Mr. Popich agreed to take 8 and 9. Mr. Culbert and Mr. West are taking Chapter 3. Ms. Madden agreed to take Chapter 4. Mr. Eldridge took Chapter 5. Mr. Gulley took Chapter 7. Mr. Patarino was assigned Chapter 6.

## 6. Closing Comments and Adjournment