Date: 03Jan2017.
Location: Santa Ana Elks Lodge, 212 S. Elk Lane, Santa Ana, California.
Called to order by Scott Davis at 12:03 p.m.

Self introductions by new or long-absent attendees.

Approval of December Minutes postponed.

**Treasurers Report**
The Treasurer's report was postponed.

**Membership Comm. Report**
Postponed.

**Old Business**
None addressed.

**New Business**
None addressed.

**Code Questions**
An attendee asked about cord length at area of a sink. Scott mentioned that the 2017 NEC clarifies vagueness of the issue in the 2014 NEC. Scott also advised that Section 90.4 says an AHJ inspector may approve, by special permission, otherwise non-compliant installations as long as judged equally safe. This most often occurs when new methods or materials not yet addressed by the Code are used.
John Shanahan, P.E. asked about requirements in Section, 2011 NEC, 517.18 (A) regarding circuits originating from the same panelboard. He asked if lighting can come from a separate 277-V panel. Scott spoke at length about the 517 requirements. He suggested that John contact him at his office.

Jerry Schreiber, P.E. spoke about a PV system with eleven 500-W modules connected in parallel, delivering 10 A at 50 V dc. Scott asked that a drawing be provided to facilitate the analysis. Scott added that he had approved similar designs, and suggested that Jerry look for articles by John Wiles in the IAEI magazine archives.

Jerry went on to talk about the application of Section 210.70 for a water-heater closet. Multiple responses from the group suggested that illumination of the equipment will satisfy the requirement whether or not the source luminaire is in the actual closet.

**Inspector Time**
An attendee asked if installing a GFCI receptacle under the kitchen sink was Code compliant. Scott responded that it would not be compliant because such controls cannot be behind a door. Scott emphasized that this is a new requirement because of new language requiring that GFCI controls be readily accessible. Scott added, in response to a question from Dan Vaughan, that the manufacturer's installation instructions of a GFCI device direct the installer to label all downstream devices protected by such GFCI device. Code section 406.4(D) also addresses the issue.

Henry Martinez described a scenario that would put a transformer and associated disconnect(s) under an air duct in a parking garage. His concern was the application of the Code requirement for clear space above electrical equipment. Scott suggested that Henry had the authority to accept the installation once he has considered if there are alternative means and evaluated the likely outcomes.

**Consultant Time**
None taken.

**Testing Lab Time**
None taken

**Contractor Time**
Page 2 of 4
None taken.

**Manufacturer Time**
None taken.

**Utility Time**
Gilbert Aceves with SCE mentioned that he was seeing the construction of lots of battery storage projects going in. He noted the installation of 12-kV battery-storage systems in tilt-up buildings in Irvine. Scott mentioned that the fire department has jurisdiction over large battery installations whether lead-acid or lithium-ion construction.

An attendee asked Gilbert why there are different policies at different district offices. Gilbert suggested that some policies may be a bit different among offices; he also offered an explanation of why a given policy may be implemented at the discretion of a particular office.

Gilbert mentioned, in response to a comment from Scott, that the new ESR will have 11 pages for 38-kV switchboards.

**Education Program: Analysis of Changes, 2014 NEC.**
Presented by Scott Davis and began at 12:55 p.m.

230.82(3) Equipment Connected to the Supply Side of Service Disconnect. Cautionary signage is required stating that a meter disconnect switch is not a load-break device.

240.21(B)(1) Feeder Taps not Over 10ft Long: taps must terminate in equipment containing an overcurrent device(s). Wire sized for the equipment, not for the overcurrent device. Cannot go next size up for overcurrent protection for taps; same for transformers. Exception for listed equipment, e. g., surge protectors.

240.21(C)(2) changed in the same way as above, but for transformer secondaries. *(This means that secondary conductors will have to be sized for the bus of the panel or disconnect which they supply, rather than sized for the main breaker or fuses that are at (or ahead of) the panel or fuses in the OCPD disconnect.)*

Motor-tap requirements in Article 430 override Article 240 requirements.
240.87 Arc Energy Reduction: The previous "Noninstantaneous Trip" wording was changed to "Arc Energy Reduction"; 1200 A breaker frame or greater. John Janson explained that electronic breakers will have a "maintenance mode" setting that will reduce arc-flash energy by reducing the response time of the breaker. He added that the NEC wording correlates to NFPA 70E.)

250.8(A) Permitted Methods for Grounding and Bonding Connections. Grammar change allows multiple methods of grounding and bonding rather than a single method.

250.21(C) Marking - Ungrounded Systems. Ungrounded systems must be marked "Caution Ungrounded System Operating ______ Volts Between Conductors" at the source / first disconnecting means.

250.24(A)(1) System Grounding Connections.

250.64(B) Grounding Electrode Conductor Installation ... not required to comply with 300.5.

250.64(D) and 250.64(D)(1) Common GEC: Multiple Disconnection Means connected to a common ground bus.

250.64(E) Raceways and Enclosures for Grounding Electrode Conductors. GEC must be bonded to a magnetic raceway at both ends of the raceway/enclosure containing the GEC.

250.66(A) and (B) Grounding Electrode Conductor "Sole Connections". Language revised to clarify that two ground rods are considered to be one electrode with regards to the "sole connection" sizing provisions.

Adjourned at 2:04 p.m.

Minutes respectfully submitted by Dan Vaughan.