



IAEI Border Counties Division
Meeting Minutes

Date: **January 12, 2010**

Time: 12 Noon - No Host Lunch
1 P.M. - Meeting

Location: Sizzler Restaurant (Meeting Room)
3755 Murphy Canyon Road
San Diego, CA 92123

1. Call to Order and Self Introductions

Meeting was called to order by Bruce Barnes, President of the Border County Division, at 1:00 P.M. All in attendance (35) made self- introductions. There were four first timers who re-introduce themselves.

2. Review and Approval of Minutes

Someone asked if CEI's meeting will take place this year in San Diego. Pat Healy mentioned 2010's meeting has been canceled for the time being. So Cal Chapter of IAEI has voted not to support CEI this year. CEI may disband the committee all together. Steve Jones said there's a meeting at the end of January to discuss further. The training within CEI should only be related to California, not to the rest of the country. There should be an answer by February.

Minutes from the December 8, 2009 meeting were reviewed and approved.

3. Reports

Treasurer's Report: Steve Jones reported total receipts from 12/8/2009 – 1/12/2010 to be \$6,088.38. Interest income earned was \$1.55. Ending balance is \$6,089.93.

The report was approved as presented.

Membership: Steve Jones reported no changes in membership. Steve & Tom Griffith will be working together to increase interest and membership for IAEI.

Education: Mark Chrysler mentioned a class to be held Wednesday (1/13/10) on Electrical Systems Failure at SDSU. Mark had a conference call with other education chairs. The goal is to avoid duplication of programs to ensure maximum coverage of topics within the So Cal Chapter. Mark will be teaching Soars grounding later on this year. He mentioned there are still

a few slots available if anyone is interested in teaching or have a subject they'd like to see covered. Bruce Barnes inquired about Joe Baber's class. Mark said there are classes on the third Tuesdays of every month but wasn't sure what the subject will include.

Steve Jones said the city of Oceanside has been working with Karen Prescott (NECA), Joe, and Phillip (San Diego Electrical Training Center) and have come up with a series of electrical training classes to be held in the city of Oceanside. There'll be about 12 classes and runs about 1 ½ to 2 hours and is free of charge. One of the training sessions will include taking apart a transformer. Their goal is to have the attendance of Southern Orange County, all of San Diego County, Temecula, and Murrieta. This will be a good opportunity for IAEI, ICC and IBEW to work together and hopefully there'll be more combination inspectors to come from this. NECA has offered to pay for all of the refreshments associated with the training.

4. Old Business

Tax Audit: Bruce Barnes mentioned that we'll get started on the tax audit early this year (probably in February) so that we don't get behind. The audit will be overseen by Nancy Martinez, Billy Duggins, and Dean Mastrovic.

Billy Duggins mentioned that he'll do the updates on the local jurisdiction changes for one of the education programs.

Darold Wiley is now working for Abbott & Associates in Dana Point.

5. New Business

Bruce Barnes requested approval of the costs for the digital recorder and the software to translate the audio into text for the meeting minutes. The total cost is \$315.35. All was in favor of approving the cost.

There was a question on whether or the PV class with the City of San Diego to be held on Thursday (1/21/10) was full. Pat Healy said the class is pretty full. However, contact Gina Adams if you're really interested to see what the latest update was.

6. Education Program

Presenter: Scott Humphrey – Field Label Evaluator with Intertek

Scott covered the following items in his presentation:

- PV – 2008 NEC
- Article 690 (2008)
- Overview – How does solar work and how is it made?
- Basic Operation of a Solar Cell
- Silicon PV Module
- 200W Solar Module
- 690.2 Definitions
- 690.2 Building Integrated PV (BIPV)
- 690.2 Bipolar PV Array

- Proposal Definition “Monopole Subarray” - Two monopole subarrays are used to form a Bipolar PV array.
- Series vs. Parallel
- Inverter – used to convert DC input to AC output and may serve as battery chargers.
- 690.4 Installation
- 690.4 (B) Conductors of Different Systems
- 690.5 Ground Fault Protection
- Exception to GFP
- 690.6 AC Modules
- Maximum System Voltage
- IV Curves
- 690.7 Maximum Voltage
- 690.7 (D) Circuits over 150 Volts to Ground
- 690.7 (E) Bipolar Source and Output Circuits
- 690.8 Circuit Sizing and Current
- Influencing Factors
- 690.9 Over Current Protection & Proposal Change
- 690.9 (C) PV Source Circuits
- 690.9 (D) DC Rating
- 690 (E) Series Overcurrent Protection
- 690.10 Stand Alone Systems
- 690.13 Disconnecting Means
- ROP Proposal – Exception – a switch in the grounded conductor may be allowed.
- 690.14 Additional Provisions
- 690.15 Disconnection of PV Equipment
- 690.16 Fuses
- 690.17 Switch or Circuit Breaker
- DC Disconnect may have limited listing.
- Wiring Methods
- Readily Accessible?
- 690.31 (B) Single Conductor Cable (New 2008 Article)
- 690.31 (C) Flexible Cords and Cables
- 690.31 (D)
- 690.31 (E)
- The disconnecting means shall comply with 690.14 (A) through (D) readily accessible.

This presentation will continue in the next IAEI Border Counties Division meeting on February 9, 2010.

7. Code Question(s) of the Month

Question: I’m expecting to design a hotel for a three phase, 120/208 voltage, 4 wire service. The service panel will be single phase, 120/208 voltage, 3 wire. Does NEC table 310.15 (B)(6) apply here since the code is for single phase, 120/240, 3 wire?

Answer: Its conductor types and sizes are not applicable to this application.

8. Organizational Time

Inspectors - none

Consultants - none

Testing Agencies - none

Contractors - none

Manufacturers – Steve Schinko passed out a handout on the proper way and the only UL listing of connecting DC, double break is required. Eaton Corporation does manufacture a double break DC switch. Steve will bring in the switch in for next month's meeting.

Utilities – Bruce Barnes reiterate that as of January 1, 2010, a visible open disconnect is no longer required on "self-contained" PV systems. However, it is still required for "CT's". Rusty Anderson brought up the "class 320" residential meters for the 400 amps panel.

9. Final Business

None.

10. Adjournment

There being no further business, meeting was adjourned at 2:53 P.M.

Next meeting: Tuesday, February 9, 2010 at 1:00 P.M.

Respectfully submitted,

Tiffany Kirk
BCIAEI Secretary