



**President:** Mark Chrysler  
**1st Vice President:** James (Rusty) Anderson  
**2nd Vice President:** Martin Montessoro  
**Secretary:** Tiffany Kirk  
**Treasurer:** Steve Jones  
**Membership Chair:** Dean Mastrovic  
**Education Chair:** Bruce Barnes  
**Sergeant at Arms:** Nancy Martinez  
**Ex-Officio:** Bruce Barnes  
**Other Members:** Billy Duggins and Pat Healy

**IAEI Border County Division**  
San Diego, California  
**Minutes for March 8, 2011**  
12:00 p.m. No-Host Lunch  
**1:00 p.m. - 3:00 p.m. Meeting**  
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 Mark Chrysler, President of the Border County Division, at 1:00 P.M. 35 in attendance made self introductions. There were 3 first timers.

Randy Hunter and Chuck Leisher were in attendance. Randy talked about the upcoming Southwestern Section meeting that will be hosted by the Southern California Chapter.

## **2. Review and Approval of Minutes**

Minutes from the February 8, 2011 meeting were reviewed and approved as presented.

## **3. Reports**

Treasurer's Report: Steve Jones was not present. Nancy Martinez reported there are expenses from the "Analysis of Changes" seminars, the costs of the Analysis of Changes books to the IO, and CEU's for the seminars that needed to be paid. However, we did have 51 attendees. Overall, the Division did gross a little bit of income from sponsoring the seminars. The treasurer's report were reviewed and approved as presented.

Membership: Dean Mastrovic reported there are 9 new applications for membership. 3 applications have already been approved for a total of 71 members for the Border County Division. Mark mentioned that Dean has been proactive at visiting the AHJ's to participate in our meetings and joining the IAEI.

Education: Bruce Barnes reported Ken Parks will be presenting in the April's meeting. Ken will present the Utility's perspective on "Photo Voltaic". May's presentation will be the continuation of the SDG&E Service Standards updates presented by Bruce. June's presentation will be by Eric Jensen. No meetings in July and August. The education for the rest of the year will be announced at the April meeting.

Mark reported an opportunity for education on March 28, 2011 for inspectors only on "Performing Inspections for Compliance" with California Commission regulations. Information on how to register is available on the sign in table. The class is held at the Center for Sustainable Energy presented by Martin Dahl. There's also a "PV" seminar held on April 14, 2011 presented by Scott Humphrey. Registration is available on the ICC website.

The Chapter meeting will be in Santa Ana on March 16, 2011. Chuck Leisher will be presenting the training on "Medium Voltage".

Nancy reported a presentation will be at the Training Center on Electric Vehicle Charging Stations from General Motors on March 18, 2011. This training is only offered to the jurisdictions.

#### **4. Old Business**

Nancy reported the two "Analysis of Changes, NEC 2008" seminars were attended by a total of 51 people. Both instructors, Scott Davis and Joe Jones, received positive feedback from the attendees. There were open dialogues between the instructors and attendees during the seminars which made the full day class interesting. The seminars resulted in 9 new applications for membership to the IAEI. Nancy thanked all those who volunteered and made the seminars a success. The division made a little bit of money from the 2 seminars.

Per Mark, no one has shown interest in participating in the audit committee since the last division meeting. Therefore, the audit committee will consist of Bruce Barnes, Dean Mastrovic and Martin Montessoro.

#### **5. New Business**

None

#### **6. Education Program**

Presenter: Behnam Abrishami with Cooper Bussmann

Subject: Overcurrent Protection and Arch Flash

The following were covered in the presentation:

- 600V or less current-limiting power fuses
- Building Electrical Systems
- Utilization Equipment
- Reliable Overcurrent Protection
- Interrupting Rating
- Fuse Current-Limitation
- High Interrupting Rating
- Current-Limitation
- Current-Limitation Mechanical Stress
- Current-Limitation Benefit
- Component Protection
- Component Protection: Conductors
- Arc Flash Hazard
- OCPD Maintenance Costs
- Modern Current-Limiting Fuses
- Electric Arc
- Personnel Hazards Associated With Arc Flash & Arc Blast
- Overcurrent Protection Role
- Fuse Arc Flash Hazard Mitigation

## **7. Code Question(s) of the Month**

Question: A solar installation, the design intention is load side of a 1600 amp GFP main, a 100kW inverter, the point of connection is proposed to be at a 200amp frame with a 200amp fuse bucket. The question is the GFP main is disabled (it's old) and whether or not it has to be dealt with. This is a two part question: first, if it would be okay to install the solar connection at the load side of the 1600amp GFP main? Also, how about the disabled GFP main? And second, if the inverter isn't equipped with a dc disconnect for a ground mount behind the fence situation, where would the dc disconnect be allowed? Would it be on the combiner in the field or adjacent to the inverter?

Answer: First part (per Mark), the answer has to do with both the code and manufacturer specifications. The limitation is that the 1600amp GFP, 480v main is not listed for being back-fed by the manufacturer. Therefore, it's a manufacturing issue if the breaker is installed on the load side. The line side tap would be a better way to go.

Steve Schinko doesn't think there is a UL testing for back-feed on fuses. Chuck Leisher agreed with Steve. However, Chuck did say there are testing for breakers for back-feed. Steve mentioned the GFP "may" identify line/load. Chuck said 489 does test for over-current protection in both directions. Steve said for customers to check with the manufacturer for whether or not a breaker is suitable for back-feed. Per Randy Hunter,

the language in the 2011 NEC specifically talked about the labeling of line/load on the breaker.

Second part (per Mark), for the dc disconnect 690.14 & 690.15 frames the requirements for the disconnecting means whether at the modules and combiners or at the inverter. 690.15 identifies the requirement must be at the inverter.

## **8. Organizational Time**

Inspectors – Rusty Anderson had a question about stray voltage/contact voltage with vinyl/non-conductive pools. Randy Hunter discussed the language from the 2008 NEC and the 2011 NEC. In short, per 680.26 the grounding grid is required for non-conductive pools.

Consultants – None

Testing Agencies – None

Contractors – None

Manufacturers – Rob Ryan from GE said they're having an all day event show casing the Level 2 EV Charging Station at UCSD on Tuesday (03/22/11). There will be a few different electric vehicles to test drive.

Utilities – None

## **9. Final Business**

None

## **10. Adjournment**

There being no further business, meeting was adjourned at 2:52 P.M.

Next meeting: Tuesday, April 12, 2011 at 1:00 P.M.

Respectfully submitted,

Tiffany Kirk  
BCIAEI Secretary