

## Contents

1. Summary .....	2
2. Officer's Announcement .....	2
3. Introductions of Members and Guests (all) / Sign-In Sheet .....	2
4. Review of IEEE Patent Disclosure (5 Slides) .....	3
5. Status of PAR.....	3
6. Discussion 1: PAR Options.....	4
7. Discussion 2: PAR Discussion .....	4
7.1. Motion: Withdraw PAR .....	4
7.2. Motion: Reconsider the above Decision .....	4
7.3. Motion: Rescind Withdrawal and leave active until October 2012 Meeting .....	4
7.4. Get Copy of the PAR.....	4
8. Discussion 3: Draft Review .....	4
9. Discussion 4: NEMA and Mechanical Testing .....	5
9.1. Alternate Testing to EMF .....	5
9.2. Motion to Form a team to develop a Test Plan for NEMA .....	5
10. Discussion 5: Types of Conductor Materials to include in the Standard .....	5
11. Discussion 6: Alteration of Tables.....	5
12. Actions .....	6
13. General Notes .....	6
14. Next Meeting .....	6

## 1. Summary

A meeting was held in conjunction with the IEEE Substation Committee Annual Meeting to discuss the progress of a Draft of Standard 837 to meet the current PAR.

## 2. Officer's Announcement

The team seems to have a need to add a Technical Writer to the list of officers for this Working Group. Jesse Rorobaugh has agreed to assume the role.

## 3. Introductions of Members and Guests (all) / Sign-In Sheet

Attendees: 18 members and guests, 10 members.

Attendance as follows:

Role	First Name	Last Name	Email
Member	Bryan	Beske	bbeske@atcllc.com
Member	Dale	Boling	dboling@erico.com
Guest	Eric	Borden	ejborden@pepco.com
Guest	Jorge	Cardenas	jorge.cardenas@comed.com
Member	K. S.	Chan	kschan@bechtel.com
Guest	Dr. Franco	D'Alessandro	info@physelec.com
Member	Marcia	Eblen	mls2@pge.com
Member	D. Lane	Garrett	dlgarret@southernco.com
Member	Steve	Greenfield	sgreenfield@erico.com
Guest	Robert	Hobbs	bhobbs@dmcpower.com
Member	Richard	Keil	rpkeil@cai-engr.com
Chair	Dave	Kelley	dave.kelley@srpnet.com
Guest	Cris	Kramschuster	ckramschuster@atcllc.com
Member	Henri	Lemeilleur	henri.lemeilleur@tnb.com
Member	Cary	Mans	cmans@conind.com
Member	Roger	Montambo	rmontambo@galvanelectrical.com
Member	Shashi	Patel	patel@ee.gatech.edu
Member	Jesse	Rorabaugh	jesse.rorabaugh@sce.com
Secretary	Michael	Rzasa	mrzasa@burndy.com
Member	Will	Sheh	wsheh@atitec.com
Member	Doug	Smith	dougsmith@ieee.org
Member	Greg J.	Steinman	greg_steinman@tnb.com
Member	Curtis	Stidham	curtis.stidham@te.com
Vice-Chair	Brian	Story	bstory@entergy.com
Guest	Yance	Syarif	ysyarif@fushicopperweld.com
Guest	Keith	Wallace	kawallac@southernco.com

#### **4. Review of IEEE Patent Disclosure (5 Slides)**

The committee reviewed the IEEE Patent Disclosure as required when there is an active PAR.

#### **5. Status of PAR**

The PAR has been in place since June 12<sup>th</sup>, 2008 and is valid through December 2012. Considerations are in place regarding extending the PAR or allowing the PAR to run out.

## **6. Discussion 1: PAR Options**

Reviewed the status of the PAR and it was indicated that we did have the ability to extend some time. Further discussion was held regarding the working group's options with the PAR.

1. Let the current PAR lapse
  - a. Applies the "IEEE 10 year cycle" and current draft is good through 2018 (10 year cycle, started in 2008)
2. Complete this PAR 2012
3. Extend this PAR for 2 years for further research

## **7. Discussion 2: PAR Discussion**

### **7.1. Motion: Withdraw PAR**

A motion to withdraw the PAR was offered and discussed. The working group voted 13 for and 4 against (2 abstained) to withdraw. The vote was the minimum to provide a "super-majority" and therefore passed.

### **7.2. Motion: Reconsider the above Decision**

A motion to reconsider the Withdrawal was offered and discussion followed. A vote of 15 for reconsidering with 4 abstaining allowed this motion to pass leading us to our next motion.

### **7.3. Motion: Rescind Withdrawal and leave active until October 2012 Meeting**

A final motion and discussion to Rescind the above withdrawal was held. A vote of 14 for and 5 against allowed this working group to stay intact and disposition in October.

### **7.4. Get Copy of the PAR**

The group discussed the Scope of the current PAR. An action to acquire the current PAR was assigned (action 3).

## **8. Discussion 3: Draft Review**

A review of draft 8.7 architected in January was discussed. Findings for the first half of the observations were made and classified into three categories:

1. Typo – To be taken care of by the technical writer (action 4)
2. Administrative – based on the direction of the PAR, we will review in October
3. Technical – similar to Administrative, we will review in October

The table reviewed is found at the end of these notes.

## **9. Discussion 4: NEMA and Mechanical Testing**

### **9.1. Alternate Testing to EMF**

Alternate testing to the existing EMF testing discussed with the thought there is a more cost effective test method available. It was mentioned that this topic also arose at recent NEMA meetings. Discussion ensued regarding how this IEEE group should align strategies with NEMA.

### **9.2. Motion to Form a team to develop a Test Plan for NEMA**

(Action 1) A motion was made and carried out with 15 votes “for”. The group agreed to assemble a task force (comprised of utilities) to develop a test plan. Task force is as follows:

1. Lane Garrett (Lead)
2. Marsha Eblen
3. Keith Wallace
4. Jesse Rorabaugh
5. Shashi Patel

The group is to produce a “comparative” test plan illustrating a test sequence that would indicate the difference between the EMF test and a pure Mechanical “Shock” load test. In addition to the test plan, the group is also to indicate a rough budgetary cost figure for the NEMA group.

## **10. Discussion 5: Types of Conductor Materials to include in the Standard**

With respect to Acid Testing there was a discussion as to the effects on Stainless Conductor or connectors. The conclusion was to assign an action (action 2) to review with a chemist for professional advice.

## **11. Discussion 6: Alteration of Tables**

Several alterations of the tables within the current draft of the standard were discussed. In Table 6, there was some concern that the table implied that copper was equivalent to copper clad steel in the same row. It was suggested that the table be reformatted to eliminate this confusion.

Additionally, Table C.1 was taken from IEEE 80 and needs to be updated to match the latest version of this standard.

Finally, a new table was suggested which would provide the fault current test current for the copper conductors listed in Table 4 and the copper clad steel conductors in Table 6.

## 12. Actions

	Assign Date	Description	Owner	Due Date	Status
1	5/23/2012	Develop a Test Plan and Estimated Cost	Test/NEMA Task Force (Lane Garrett lead)	8/1/2012	In Process
2	5/23/2012	Review the Effects of Acid on Various Conductor Materials with a Chemist	Marsha Eblen	10/1/2012	In Process
3	5/23/2012	Copy of PAR	Michael Rzasa	7/15/2012	Complete
4	5/23/2012	Draft Standard, Update Typos	Jesse Rorabough	7/15/2012	In Process
5	5/23/2012	Add/Create a Table of Materials	Jesse Rorabough	8/15/2012	In Process
6	5/23/2012	Update Table 6 to include AL, CU and Copper	Jesse Roraborogh	8/15/2012	In Process
7	5/23/2012	Circulate Latest Draft	Michael Rzasa	9/1/2012	Pending
8	5/23/2012	Provide Draft Feedback	Working Group	9/15/2012	Pending

## 13. General Notes

Team Site Notes:

Website: <http://ewh.ieee.org/cmte/substations/>

Protected File Password: e9837

## 14. Next Meeting

The next meeting is to be held the week of October 7<sup>th</sup> at the Holiday Inn Opryland Airport hotel.