PES Stationary Battery Committee Meeting Minutes

Monday June 25, 2012

General Meeting

1. Meeting Opening and Introductions

The meeting was called to order by committee Chair Bill Cantor at 8:06 am.

Welcome to all attendees, members and visitors. The attendee/sign-in sheet list was sent around. Introductions by all attending were given.

Bill Cantor welcomed John Gagge and Steve Vechy of Enersys and thanked them for organizing the meeting. John provided an overview of the meeting facility and the surrounding downtown area.

The minutes from January 2012 San Juan, PR meeting were approved.

Attendance Summary as of Sunday, June 24, 2012
Current membership of the SBC: 56
Persons present at general membership meeting: 60
Voting members present at general membership meeting: 40
Visitors present at general membership meeting: 26
Percentage of members attending: 71%
Quorum: Yes

2. Document status:

Standards and Working Group Status

Bill Cantor and the working group chairs provided an update on the various standards.

<table>
<thead>
<tr>
<th>PAR # / WG</th>
<th>Subject</th>
<th>Chair</th>
<th>Last Issued</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>484</td>
<td>Vented Lead Acid Installation</td>
<td>LaMarca</td>
<td>2002</td>
<td>Expires 2018. Will have a meeting Wednesday afternoon and Par discussion.</td>
</tr>
<tr>
<td>PAR # / WG</td>
<td>Subject</td>
<td>Chair</td>
<td>Last Issued</td>
<td>Status</td>
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<tr>
<td>-----------</td>
<td>---------------------------------</td>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1187</td>
<td>VRLA Installation</td>
<td>Miller</td>
<td>2002</td>
<td>Expires 2018. PAR expires 12/2012. WG session this meeting.</td>
</tr>
<tr>
<td>1189</td>
<td>Battery (VRLA) Selection</td>
<td>Marrero</td>
<td>2007</td>
<td>PAR is open to change to “Battery Selection”. Expires 2016.</td>
</tr>
<tr>
<td>1578</td>
<td>Spill Containment</td>
<td>McCluer</td>
<td>2007</td>
<td>Expires 2018. Will be meeting this week on ballot resolution.</td>
</tr>
<tr>
<td>1679</td>
<td>Emerging Energy Storage Technologies</td>
<td>McDowall</td>
<td>2010</td>
<td>2020</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>PAR #</th>
<th>Subject</th>
<th>Chair</th>
<th>Last Issued</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1625</td>
<td>Portable Computer Batteries</td>
<td>Layton</td>
<td>2008</td>
<td>No action.</td>
</tr>
<tr>
<td>1725</td>
<td>Cell Phone Battery</td>
<td>Howard</td>
<td>2006</td>
<td>Expires 2021</td>
</tr>
<tr>
<td>1679.1</td>
<td>Emerging Technologies</td>
<td>Nispel</td>
<td></td>
<td>PAR open. PAR expires 2015</td>
</tr>
<tr>
<td>1679.2</td>
<td>Sodium Batteries</td>
<td>Chatwin</td>
<td></td>
<td>PAR open. PAR expires 2015</td>
</tr>
</tbody>
</table>

3. **Coordination Reports**


**Infobatt** – Zbig Noworolski - reported on the next Infobatt Canadian battery conference. Papers are welcomed but not necessary. Presentation slides required. The date is March 17-19, 2013 in Calgary. Details can be found at www.infobatt.com. There will be no conference in 2012.

**INTELEC** – Steve Vechy - 34th conference September 30-October 4th. Location is Scottsdale, AZ. Details at www.intelec.org. There will numerous recreation programs for attendees and spouses. A Grand Canyon tour is one of the activities. Contact Curtis Ashton with recreation activities questions at curtis.ashton@centurylink.com.

**NEWNEB Conference** – Art Salander briefed the group about the upcoming utility industry battery conference. Dates are October 7-8, 2013.

**NFPA 70E** - Steve McCluer – Proposals were sent in recently to NFPA. A DC task group has been developed by NFPA 70 and NFPA 70E. There will be a meeting in August on this matter. Proposals on Article 480 of the NEC have been submitted.

**PES General Meeting** – July 22-26, 2012 San Diego. Bill Cantor, SBC Chair, will be attending and chairing a paper session. There will be battery-related papers presented; most are research related. Details at www.pes-gm.org.
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**MSDS Standardization** – Bill Cantor – Looking at fire diamonds and their rating relative to reactivity. Contact Gary Balash for more information.

**Nuclear Task Force** – Jeff LaMarca - New plant design at Plant Vogel and other topics will be discussed.

**NERC PRC-005-2 Draft** – Chris Searles provided a brief summary for the attendees about the activities within the Committee’s NERC Task Force and the current ballot outstanding on the standard. Comment period ends 6/27. The next SDT meeting is July 10 in Miami.

4. **Site Selection Committee**

June 2012 Report

The Site Selection Subcommittee would like to plan meetings and select locations in advance. In order to achieve this goal, it will require volunteers to host and/or plan an upcoming Stationary Battery Committee meeting.

**Next Meeting** – Winter 2013 – Chris Searles – Chris presented on the Tucson, January 13-17, 2013 meeting with a review of the venue in a slide show as well as some of the suggested recreational activities including Pinnacle Peak and the Pima Air Museum. *Book early please!*

The following companies and/or individuals have indicated that they would like to sponsor/organize a meeting. Please find below the list of preliminary meeting locations:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter 2013</td>
<td>BAE</td>
<td>Chris Searles</td>
</tr>
<tr>
<td></td>
<td>Tucson, AZ</td>
<td>January 13-17, 2013</td>
</tr>
<tr>
<td>Summer 2013</td>
<td>API</td>
<td>Chris Searles/Ed Rafter</td>
</tr>
<tr>
<td></td>
<td>Kansas City, MO</td>
<td>June 2013</td>
</tr>
<tr>
<td>Winter 2014</td>
<td>ICCNEXERGY</td>
<td>Chris Searles</td>
</tr>
<tr>
<td></td>
<td>San Diego, CA</td>
<td>January 2014</td>
</tr>
<tr>
<td>Summer 2014</td>
<td>APC</td>
<td>Dan Lambert</td>
</tr>
<tr>
<td></td>
<td>Providence, RI</td>
<td>June 2014</td>
</tr>
<tr>
<td>Winter 2015</td>
<td>XXX</td>
<td>January 2015</td>
</tr>
<tr>
<td></td>
<td>XXX, XX</td>
<td></td>
</tr>
<tr>
<td>Summer 2015</td>
<td>Alber??</td>
<td>Rick Tressler??</td>
</tr>
<tr>
<td></td>
<td>Columbus, OH</td>
<td>June 2015</td>
</tr>
</tbody>
</table>
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Please keep in mind that locations are subject to change based on prevailing conditions at each sponsor’s company. This list serves as a guideline and can be changed with sufficient notice to the group.

5. **Sunday Technical Sessions** – Voting on a variety of technical topics was conducted. The following topics will be presented at the next meeting in January 2013 in Tucson:

1. **DC bus ripple and related issues**  
   Chair/Coordinator – Alan Byrne  
   Mike Powell expressed an interest in providing some data and presenting.

2. **Ohmic testing – correlation with capacity**  
   Chair/Coordinator – Chris Searles & Wayne Johnson

A 20 minute break was called at 0915. The meeting resumed at 0935.

6. **New Business**

**IEEE Staff Liaison Report and Information**  
Malia Zaman, Program Manager – Technical Program with IEEE introduced herself to the group. Malia is our IEEE Staff Liaison. Background and contact information was provided.

WG chairs were reminded that the expiration date for standards is a hard date. Planning is essential if documents are going to need to be worked on. Suggested planning includes at least 3 years or more before expiration which includes obtaining the PAR.

The interpretations process has been eliminated. The committee SBC can review and discuss IR’s but IEEE will not endorse the SBC’s comments on a particular request.

Balance rules have been changed. There are now 30 categories to select from overall. IEEE 1187 is directly affected by the imbalance issue. Be sure to re-check your selection when the invitation to ballot comes out.

If the scope of a document changes during development, a modified PAR is required.

Review of the patent slides at each general meeting and at all WG meetings is required by all chairs.

**Policies and Procedures for Standards Development**  
Moved by Bob Beavers and seconded by Steve Clark to approve the IEEE PES-SBC revised policy and procedures manual. A vote was taken. 31 positive votes were counted. There were no negatives.
IEEE 1187 Chair
Russ Miller is stepping down as chair of this WG. John Polenz has accepted the position of chair. The ballot pool is reopening with new categories. Excessive counts in General Interest and User categories are resulting in an imbalance in the ballot pool. Be sure to log in to MyProject and change your selection.

New IEEE Document – NEMA PE5 as an IEEE Standard
Art Salander presented the potential for development of this NEMA standard as an IEEE standard. Discussion followed. The topic will be further discussed in the 946 WG meeting.

IMAT
Jim McDowall presented slides on the IEEE tool for WG attendance. Use of this online tool is required by all WG participants. Paper sign-in sheets are no longer used. WG chairs are reminded that they are responsible for maintaining an up to date WG membership roster.

You must have an IEEE web account to use IMAT as well as all other online IEEE related functions including balloting and messaging and MyProject settings. You do not need to be an IEEE member to obtain an IEEE web account.

PES Affiliation
Bill Cantor discussed the SBC and its affiliation with PES. PES may not be a good fit for the SBC. Options include;

1) Remain part of PES,
2) Remain part of PES but refrain from participating in PES committees/activities,
3) Switch to a new society,
4) Go back to SCC status,
5) Change to IAS affiliation (Industrial Applications Society). Malia is going to research the possibilities for a potential change. Curtis is going to research the possible change to IAS.

Additional discussion on the pros and cons of a change followed.

A non-binding vote was taken on remaining as a PES affiliate – 34 for, 4 against.

Working Group Roster Requirements (WG)
An active, up to date WG roster is essential. WG chairs must update MyProject at each meeting. This becomes very important at ballot time.

Agenda Changes
Monday afternoon – WG 535 needs only 2 hours. Remaining 2 hour slot is available if someone can use this time.
Tuesday morning - Arc flash presentation cancelled. Glossary meets for the entire session.

Wednesday afternoon – WG 1189 replaces second Glossary WG meeting. No WG 1187.

Thursday morning – WG 1375 changed to WG 946. WG 1189 now meeting.

**2013 IEEE PES-SBC Leadership Changes – Effective January 1, 2013**

Bill Cantor will be past chair  
Lesley Varga will be chair  
Rick Tressler will be vice chair  
Curtis Ashton will be secretary

**Patent Slides**
The patent slides were reviewed. All WG chairs must review these slides at the start of a WG session. If an attendee has an issue it must be brought up and discussed.

**Meeting Recess**
The general membership meeting was recessed at 1100 local until 1130 Thursday, June 28th.

**Tuesday, June 26th**

Working Group meetings continued.

**Wednesday, June 27th**

Working Group meetings continued.

**Thursday, June 28th**

Working Group meetings continued until mid-morning, at which time, the full committee was reconvened to discuss progress of the working groups and sub-committees request sessions for the next meeting.

**Closing meeting on Thursday June 28th:**

Bill Cantor reconvened the general meeting at 11:30 a.m. Bill thanked Enersys, John Gagge and Steve Vechy hosting and organizing the meeting.

Bill reminded WG chairs to get minutes into Rick and to update the WG rosters on MyProject.
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Working Group Chair reports & Sessions needed for the June 2012 summer meeting:

<table>
<thead>
<tr>
<th>Standard/PAR#</th>
<th>Status - End of This Meeting</th>
<th>Sessions Needed</th>
<th>Session Duration (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>484</td>
<td>Discussed document revision schedule. No action at this time. PAR will be started early 2013</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>535</td>
<td>The group resolved a couple of minor issues and the revision has now been sent for Mandatory Editorial Coordination. The invitation to ballot will be sent out within a couple of weeks.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>946</td>
<td>Expanded scope and reviewed the title. A PAR change request will be submitted as a result of the scope change.</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>1106/1115</td>
<td>Worked on scope and purpose for the new PARs. Will be submitted in the near future. Discussed general principles.</td>
<td>1</td>
<td>4 (2hrs for each document)</td>
</tr>
<tr>
<td>1187</td>
<td>Addressed ballot pool imbalance. User-other still heavy. Comments addressed.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>1189</td>
<td>Worked on the document in various areas</td>
<td>3</td>
<td>1, 4 hr</td>
</tr>
<tr>
<td>1375</td>
<td>Will let the Par expire. Looking at integrating/harmonizing the two documents.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1578</td>
<td>Put out for reaffirmation. Received 66 comments. Reviewed same. Expires 2018. Do not need to do any further work for 3 years. A ballot will go out to inform baloters that comments were rejected.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1679.1</td>
<td></td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Battery Glossary</td>
<td>Agreed on the title for the document, scope, purpose. Agreed on the document format. Began working on the document and got through 55 definitions.</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
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TSTF 500 Nuclear WG

Discussion on plant Vogel from a nuclear perspective, 72 hour battery plant, NRC request for assistance relating to extended battery duty cycles on and BWR and PWR reactors. Battery chargers and failure modes relating to battery failures due to high voltage application on failure of the charger. NRC NPRM is in process as a result of Fukushima. Al Williams reported on the loss of capacity of the batteries at Watts Bar Nuclear. Steve expanded on the nature of the failure at the closing meeting.

1679.2 No action this meeting 1 4

450
485
1184
1188
1491
1657

NERC PRC-005-2 Update – Thursday at the closing of the meeting
PRC-005-2 ballot has passed. Bill, Chris and Rick will attend the next SDT meeting in Miami 7/10.

PES Meeting San Diego
Bill Cantor and Lesley will be attending the PES meeting in San Diego July 26th. Both will be chairing a battery session at this meeting.

Winter 2012 Meeting Note
Steve Clark mentioned the possibility of setting up a tour of the USAF Boneyard. Initial interest seemed to be very positive.

Adjournment
Motion to adjourn the meeting was made by Steve Clark
Motion seconded by Bill Cantor
Meeting adjourned by Bill Cantor at 1155.
Instructions for the WG Chair

- At Each Meeting, the Working Group Chair shall:
- Show slides #1 and #2 of this presentation
- Advise the WG membership that:
  - The IEEE’s patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the IEEE-SA Standards Board Bylaws;
  - Early disclosure of patents which may be essential for the use of standards under development is encouraged;
  - Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG, nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that, in fact, may be essential for the use of standards under development.
  - Instruct the WG Secretary to record in the minutes of the relevant WG meeting:
    - That the foregoing advice was provided and the two slides were shown;
    - That an opportunity was provided for WG members to identify or disclose patents that the WG member believes may be essential for the use of that standard;
    - Any responses that were given, specifically the patents and patent applications that were identified (if any) and by whom.
IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents
IEEE standards may include the known use of essential patents and patent applications provided the IEEE receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard [essential patents]. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent or patent application becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of either:

a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed IEEE standard against any person or entity complying with the standard; or

b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

This assurance shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.

Slide 2
Inappropriate Topics for IEEE WG Meetings
- Don’t discuss the validity/essentiality of patents/patent claims
- Don’t discuss the cost of specific patent use
- Don’t discuss licensing terms or conditions
- Don’t discuss product pricing, territorial restrictions, or market share
- Don’t discuss ongoing litigation or threatened litigation
- Don’t be silent if inappropriate topics are discussed… do formally object.

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit http://standards.ieee.org/board/pat/index.html.

This slide set is available at http://standards.ieee.org/board/pat/pat-slideset.ppt
Call for Potentially Essential Patents

- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible or
  - Cause an LOA to be submitted

Other Guidelines for IEEE WG Meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
- Don’t discuss the interpretation, validity, or essentiality of patents/patent claims.
- Don’t discuss specific license rates, terms, or conditions.
  - Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
  - Technical considerations remain primary focus
- Don’t discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
- Don’t discuss the status or substance of ongoing or threatened litigation.
- Don’t be silent if inappropriate topics are discussed … do formally object.

See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association’s Antitrust and Competition Policy” for more details.