



Transformers Committee - Administrative Subcommittee

Fall 2012 Meeting - Milwaukee, WI

Sunday, October 21, 2012, 2:00PM - 5:30PM

Chair: Bill Chiu

Vice Chair: Donald Platts

Secretary: Stephen Antosz

3. Administrative Subcommittee – Bill Chiu

Introductions

The attendees were asked to introduce themselves. The chair asked each attendee to state his/her affiliation. If the attendee is a consultant, the attendee must state if he is representing a company other than his own consulting interest. Introductions were made by members and guests.

Attendance

Members present:

Gregory Anderson
Stephen Antosz
William Bartley
Ed teNyenhuis
Bill Chiu
Ross McTaggart
Susan McNelly
Carl Niemann
Donald Platts
Michael Sharp
Stephen Shull
Edward Smith
Loren Wagenaar
Peter Zhao
Bruce Forsyth

Members absent:

Thomas Lundquist
Charles Johnson

Guests present:

Peter Balma
Erin Spiewak
Joe Watson for Tom Lundquist
Casey Ballard for Chuck Johnson
Jin Sim
Tom Prevost
Ramsis Girgis

3.1 Approval of Previous Meeting Minutes

The Chair asked for comments from the Nashville Administrative Subcommittee meeting minutes. Hearing no comments or requests to change the draft minutes, the Chair asked for a motion to approve. Vote Approved.

3.2 Approval of Agenda

The Chair reviewed the draft agenda with the attendees. There were no comments and the Chair declared the agenda approved.

Meeting Call to Order 2:00pm

- | | |
|---|------------------------------|
| 1. Introduction of Members and Guests (:05) | All |
| 2. Approval of Spring 2012 Minutes – Nashville, TN (:03) | B. Chiu |
| 3. Additions to and/or Approval of the Agenda (:02) | B. Chiu |
| 4. Chair's Report (:05) | B. Chiu |
| 5. Vice Chair's Report (:05) | D. Platt |
| 6. Secretary's Report (:10) | S. Antosz |
| 7. Treasurer's Report (:05) | G. Anderson |
| 8. Awards Report (:10) | E. Smith |
| 9. Meeting Planning (:10) | G. Anderson |
| 9.1. Milwaukee Meeting Arrangements & Host Update | |
| 9.2. Future Meetings | |
| 10. Standards Report (:20) | B. Bartley |
| 11. IEEE Staff Update (:05) | E. Spiewak |
| 12. BREAK (:10) | |
| 13. Old Business | |
| 13.1. Corresponding Members and Meeting Quorum (:10) | S. Antosz |
| 13.2. WG Data – Confidentiality, Storage, Access, & Use (:10) | S. McNelly/E. Spiewak |
| 13.3. Access to Tutorial Presentations & Copyright release (:10) | TBD |
| 13.4. GMD/GIC Position Paper (:05) | R. Girgis/B. Bartley/B. Chiu |
| 13.5. Committee O&P, WG P&P Manual Update & Learnings (:05) | P. Balma |
| 14. New Business | |
| 14.1. Meeting Schedule – Thursday General Session & Tutorial Sequence (:10) | S. Antosz/G. Anderson |
| 14.2. Confirmation of Liaison Appointments (:05) | B. Chiu |
| 14.2.1. IEEE SA SCC18 – Edwin (Ned) Brush | |
| 14.2.2. CIGRE – Raj Ahuja | |
| 14.3. Transformers Committee History and Award History (:05) | P. Balma |
| 15. Subcommittee Reports - Roundtable | |
| 15.1. Bushings (:05) | P. Zhao |
| 15.2. Dielectric Test (:05) | L. Wagenaar |
| 15.3. Distribution Transformers (:05) | S. Shull |
| 15.4. Dry Type Transformers (:05) | C. Ballard (for C. Johnson) |
| 15.5. HVDC (:05) | M. Sharp |
| 15.6. Instrument Transformers (:05) | R. McTaggart |
| 15.7. Insulating Fluids (:05) | S. McNelly |
| 15.8. Insulation Life (:05) | B. Forsyth |
| 15.9. Performance Characteristics (:05) | E. teNyenhuis |
| 15.10. Power Transformers (:05) | J. Watson (for T. Lundquist) |
| 15.11. Underground Transformers & Network Protector (:05) | C. Niemann |
| 16. Adjourn | |

3.3 Chair's Report – Bill Chiu

3.3.1 IEEE Power & Energy Society Technical Council

The Technical Council of the IEEE Power Energy Society (PES) is presently composed of the Chairpersons of the PES Technical Committees, plus the Chairpersons of Standing Committees reporting to it. The Power Energy Society is Division VII of The Institute of Electrical and Electronics Engineers (IEEE). For operating functions it is responsible to the IEEE Technical Advisory Board and for technical activities to the IEEE Technical Activities Board. Please see <http://www.ieee-pes.org/technical-committees/statement-of-purpose-and-scope-of-activities-for-the-pes-technical-council> for further details on the Statement of Purpose and Scope of Activities for the PES Technical Council. The membership of the Technical Council is listed below.

TECHNICAL COUNCIL OFFICERS

Damir Novosel, *Chair*

Jeffrey H. Nelson, *Vice Chair*

S. S. (Mani) Venkata, *Secretary*

Rick Taylor, *Past Chair*

STANDING COMMITTEES

Awards Committee - John Randolph, *Chair*

Meetings & Marketing Committee - Jeffrey H. Nelson, *Chair*

Organization & Procedures Committee - Mani Venkata, *Chair*

Standards Coordination Committee - Bill Bartley, *Chair*

Technical Sessions Committee - Jeffrey H. Nelson, *Chair*

COORDINATING COMMITTEES

Emerging Technologies Coordinating Committee - Branislav Djokic, *Chair*

Intelligent Grid Coordinating Committee - Don Von Dollen, *Chair*

Marine Systems Coordinating Committee - Paul Bishop, *Chair*

Wind and Solar Power Coordinating Committee - Richard J. Piwko, *Chair*

TECHNICAL COMMITTEES

Electric Machinery Committee - Mike Sedlak, *Chair*

Energy Development and Power Generation Committee - Om Malik, *Chair*

Insulated Conductors Committee - John Smith, *Chair*

Nuclear Power Engineering Committee - S. K (Satish) Aggarwal, *Chair*

Power System Analysis, Computing, and Economics Committee - Sandoval Carneiro, Jr., *Chair*

Power System Communications Committee - Dan Nordell, *Chair*

Power System Dynamic Performance Committee - Nikos Hatziaargyriou, *Chair*

Power System Instrumentation and Measurements Committee - R. Arseneau, *Chair*

Power System Operations Committee - William (Bill) Cassel *Chair*

Power System Planning and Implementation Committee - M. L. Chan, *Chair*

Power System Relaying Committee - Robert D. Pettigrew, *Chair*

Stationary Battery Committee - William (Bill) Cantor, *Chair*

Substations Committee - John D. Randolph, *Chair*

Surge Protective Devices Committee - Dr. A. J. (Tony) Surtees, *Chair*

Switchgear Committee - Ken Edwards, *Chair*

Transformers Committee - Bill Chiu, *Chair*

Transmission and Distribution Committee - S. J. Ranade *Chair*

3.3.2 Highlights of PES Technical Council Activities

The most recent Technical Council meeting took place on July 25, 2012, at the PES General Meeting in San Diego, CA. Highlights of several activities of Technical Council and its Committees are included below.

3.3.2.1 Conference Paper Review/Acceptance Criteria

Based on many of the feedbacks from the various technical committees within PES over the past several years, the Technical Council has identified an opportunity for improvement by providing consistent guideline for the review and acceptance of the PES sponsored conference papers. Over the course of the past year, there were additional efforts completed towards developing a general guideline. A taskforce was formed to address the paper review and acceptance criteria. Key members of this taskforce are representatives of the following technical committees:

- Power System Relaying Committee - Robert D. Pettigrew, *Chair*
- Transformers Committee - Bill Chiu, *Chair*
- Transmission and Distribution Committee - S. J. Ranade, *Chair*

The deliverable of this Taskforce is a set of guidelines for paper review and acceptance criteria. The taskforce completed its work and reported its recommendation at the Tech Council meeting during the PES GM in San Diego that took place in July 2012. The recommendations included high level review and acceptance guideline for both the authors and the reviewers of the paper. The Taskforce's recommendations were accepted by the Technical Council and criteria will be proposed to the IEEE PES Governing Board for final approval. The presentation slides were included below for reference.

The image displays four presentation slides from the IEEE PES Technical Council meeting held on July 25, 2012, in San Diego. Each slide features the IEEE PES logo and the IEEE logo in the bottom left corner.

- Slide 1: Guideline for Review and Acceptance/Rejection of Conference Papers**
IEEE/PES Technical Council
PES GM @ San Diego
July 25, 2012
- Slide 2: Taskforce Assignment**
 - Develop review criteria for the acceptance (or rejection) of the papers.
 - Recommend any needed changes to the author's guideline for consistency with the review criteria
 - Not in scope
 - Transaction papers
- Slide 3: Perceived Issues**
 - Perceptions that the paper quality has declined in recent years
 - Reviews have insufficient guideline, resulting from high acceptance rate
 - Acknowledge a value for some members in accepting a broad range of papers (e.g. papers are required to participate)
 - Increase quality of presentations in all sessions – increase attendance
 - Increase prestige and value associated with being a presenter
 - Too many parallel sessions and overlaps in topics (both papers and panel sessions)
 - Interest by Industry to attend GM and practical value provided
 - Much more than a paper conference (standards, WG meetings, networking)
- Slide 4: Authors Guideline**
 - The author must follow the requirements set forth in the PES author's kit*
 - The paper must be in prescribed format to accommodate track-change feature throughout the submission/revision process

Reviewer's Acceptance Criteria

- The paper must follow the guidelines set forth in the author's kit;
- The paper must meet at least one of the following criteria:
 - Be of interest to the society's participants and industry stakeholders;
 - Present new methods or novel application of existing methods, analysis or experimentation;
 - Present a new, or improvement in, process, design, or technology;
 - Discuss and provide fresh thoughts on the effects of evolving public and environmental policies on the technologies we address and operate;
- Must clearly express the paper's major contribution;
- Be written in clear and understandable English language;

References

- IEEE Publication Services and Products Board Operations Manual
<http://www.ieee.org/documents/pspsmanual.pdf>
- Existing IEEE/PES website reviewer's guideline
http://www.ieee.org/psps/psps/part8/technical_standards/technical_standards/author_kit
- IEEE/PES Author's Kit
http://www.ieee.org/psps/psps/part8/technical_standards/technical_standards/author_kit
- EUC Society has some information at:
http://www.euc.soc.org/doc/tech/technical_standards/technical_standards/PaperWriting.html
- General IEEE Authors Kit info at:
<http://www.ieee.org/documents/authorkit.pdf>

Reviewer's Grounds for Rejection*

- Plagiarize or regurgitate old and well-proven thoughts;
 - Have copied others' ideas without proper acknowledgment;
- Are written exposing the same or similar ideas or represent only a minor variant of a previous publication;
- Contain gross errors; are poorly written; or written in an obscure manner;
- Commercial intent
 - the paper should focus on the technical merit of the technology, process, or ideas, and should not be overly commercial or read like a sales brochure for the specific product make or model types or services offered

*Rejection should be accompanied with a specific citing of rejection criteria

The Chair notes with appreciation that many key contributors within the Transformers Committee have authored papers and also took active roles in reviewing conference papers over the years. They also offer their experience and perspectives in this effort and many of their suggestions were also incorporated in the final recommendations.

3.3.2.2 Geomagnetic Disturbance (GMD) Taskforce

As a follow up to the discussion at the Transformers Committee meeting in Nashville back in March 2012, the concerns expressed by the members of the Transformers Committee GMD Taskforce members in regards to the IEEE Spectrum article published in February 2012 were elevated to the officers of the PES Technical Council and the representatives of the various technical committees. Many of the other PES technical committees also expressed similar concerns. Upon further dialogues over the course of several months leading up to the PES General Meeting at San Diego in July, the PES Technical Council expressed interested in having a coordinated response. The presentation slides that were the basis of the discussion at the July, 2012 Technical Council meeting are included below for reference:

For Discussion Only

Discussion Re: Geomagnetic Disturbance

IEEE/PES Technical Council Meeting
San Diego
July 25, 2012



The Discussion Only



Activities Underway/Proposed

For Discussion Only

- Transformers Committee
 - Tutorials
 - Comprehensive Tutorial in Spring 2012
 - Industry Papers
 - Sponsored T&D Conf & Expo Paper session on the GIC and its effects to power transformers
 - GMD TF
 - Position Paper
 - Industry standards (guide)
- Additional Activities at PES GM
 - ETOC - Late Breaking News Panel Discussion
 - T&D - General Systems Subcommittee Working Group



The Discussion Only



Challenges

For Discussion Only

- There are misconceptions in the industry
 - Likelihood and severity of GMD in the upcoming solar cycle
 - Confusion about the effect of the GIC on the power grid and the mitigation actions necessary
 - GIC would fail a very large number of Power Transformers due to damaging overheating
 - Utilities have not done much since the 1989 GMD storm to be prepared for the next storm
 - A GIC-Blocking device is the only solution to avoid the harmful impact of GIC



The Discussion Only



Interested Participants

For Discussion Only

- PSRC (Power System Relaying Committee)
 - Gary Robert Tull
 - Bala Beresh (bala.beresh@kvaaprotec.com), Kvaaprotec Inc.
 - Luis Marti (Luis.Marti@hydroquebec.com), HydroQue
- PSOC (Power System Operations Committee)
 - Frank Kozl (Frank.Kozl@am.com), RSM
 - Hong Chen (hongc@am.com), RSM
 - Randy Horton (rhorton@eeri.com), EERI
- PSIM (Power System Instrumentation & Measurement)
 - Farnesh Rahman (farnesh.rahman@suerte-technology.com), Suerte



The Discussion Only



Opportunity

For Discussion Only

- PES has an opportunity to demonstrate our leadership role by helping to
 - clarify the confusion with factual and relevant technical information
 - provide a more balanced perspective
 - inform the public and stakeholders (including policy makers) through education
- Benefits: Reaffirms our leadership role and enhance our brand reputation
- Cost: Time and resources of our volunteers



The Discussion Only



Additional Next Steps

For Discussion Only

- PES Position Paper?
- Industry article - Power & Energy Magazine?



The Discussion Only



References

For Discussion Only

Useful References

- IEEE/PES PSRC WG K-11, "The Effects of GIC on Protective Relaying", IEEE Transactions on Power Delivery, Vol. 11, No. 2, April 1996
- IEEE C37.89-2000 (R2006) - IEEE Guide for the Protection of Short Capacitor Banks
- IEEE C37.81-2008 - IEEE Guide for Protecting Power Transformers
- NERC GMD Taskforce - "The Effects of Geomagnetic Disturbances on the Bulk Power System", February 2012
- R. Gagné & A. Vidale, "Effects of GIC on Power Transformers and Power Systems", presented at IEEE T&D Conf & Expo, 2012



The Discussion Only



Following the discussion there was a motion made to form a Technical Council Taskforce to develop an industry white paper. The goal of this white paper is to provide additional technical information to demystify the many mis-information that has been circulating in various publications. The motion passed and subsequently the Transformers Committee Chair was appointed the Chair this Taskforce. The Technical Council also expressed its desire to have a joint white paper at the IEEE PES Technical Council level rather than independent efforts by the various technical committees.

3.3.3 Transformers Committee Activities

3.3.3.1 Subcommittee Chairperson & Technical Editor

Our current roster of the Subcommittee Chairs and Editor are:

• Bushings Subcommittee	Peter Zhao
• Dielectric Test Subcommittee	Loren Wagenaar
• Distribution Transformers Subcommittee	Stephen Shull
• Dry-Type Transformers Subcommittee	Charles Johnson
• HVDC Converter Transformers and Smoothing Reactors Subcommittee	Michael Sharp
• Instrument Transformers	Ross McTaggart
• Insulating Fluids Subcommittee	Susan McNelly
• Insulation Life Subcommittee	Bruce Forsyth
• Meetings Subcommittee	Gregory Anderson
• Performance Characteristics Subcommittee	Ed teNyenhuys
• Power Transformers Subcommittee	Tom Lundquist
• Standards Subcommittee	William Bartley
• Underground Transformers & Network Protectors Subcommittee	Carl Niemann
• Technical Editor	Sanjib Som

All of them have confirmed their commitment to serve the duration of the calendar year 2012. As we approach the end of 2012, the volunteer subcommittee leaders and editor will have the opportunity to reaffirm their desire to continue their service in the respective capacity in accordance with the established guideline in the Transformers Committee O&P Manual.

PES Technical Council was notified of the Subcommittee Chairs and Technical Editor appointments for the calendar year 2012 in accordance with the guideline set forth in our O&P Manual.

3.3.3.2 Association Management (AM) System

The AM system continues to serve important administrative functions in supporting the membership roster. This system is designed with self-administered features for updates of individual contact information. The system also serves to facilitate attendance record keeping and email distribution list for the various subgroups within the Transformers Committee.

All Subcommittees, Working Group (WG), and Taskforce (TF) Chairs are requested to use the AM system for assigning and tracking membership within their groups and for communication with their group members. All Committee members, active participants, and interested individuals are reminded also that you are responsible personally for maintaining the accuracy of your contact information, through the AM system, for Committee activities and communication. Keeping your contact information maintained in the AM system assures that the Chair of any Subcommittee, WG, or TF you are involved with will be able to contact you in a timely manner. Details on enrolling and maintaining your contact information in the AM system can be found on the Committee website.

3.3.3.3 Committee Membership

All are welcome to participate in the work of the Transformers Committee. Membership in the Committee provides recognition of your peers and indication to your co-workers and management of your active role in Committee work. If you are presently not a Main Committee Member, and you have been actively participating in our work for at least two full year – and can secure the acknowledgement and sponsorship of at least 3 activity Chairs (WGs, but must include at least one Subcommittee Chair) affirming that participation, the Committee will look forward to welcoming you as a member. Membership requirements and application forms can be found in the Organization and Procedures Manual posted on the Committee website.

As our organization is a 100% volunteer based organization, we are very much in need of all of your continued participation and sharing of your expertise towards our world-class standards development efforts. Many of our long-standing committee members have made tremendous contributions towards our standards development effort over the years and their contributions are greatly appreciated.

3.4 Vice-Chair's Report – Don Platts

3.4.1 IEEE PES Calendar of Upcoming Events

The table below lists the upcoming PES sponsored conferences and committee meetings. Please check the PES website at www.ieee-pes.org for further details.

2013 IEEE PES Joint Technical Committee Meeting (JTCM 2013)
Jan 13 – 17, 2013, Memphis, Tennessee, USA

2013 IEEE PES Innovative Smart Grid Technologies Conference
24-28 February, 2013, Washington D.C., USA

PES 2013 General Meeting
21-25 July, 2013, Vancouver, British Columbia, Canada

3.4.2 Conference Papers presented since spring 2012

3.4.2.1 2011 IEEE PES Power Systems Conference & Exposition (Orlando, FL, May 7, 2012)

A total of 20 papers have been submitted. After review, 10 of these papers were presented in the Paper Session.

ID	Title
2012TD0052	<u>Low-Cost Amorphous-Metal Rolled-up-Core Distribution Transformer</u>
2012TD0130	<u>Transformer Insulation Dry Out as a Result of Retrofilling with Natural Ester Fluid</u>
2012TD0203	Measurement and Computation of Transient Recovery Voltage of Transformer Limited Fault in 525kV-1500MVA Three-Phase Transformer
2012TD0261	<u>Gas insulated transformer application for an environmentally-friendly power station upgrade</u>
2012TD0311	<u>Statistical Insights into Furan Interpretation Using a Large Dielectric Fluid Testing Database</u>
2012TD0383	<u>Construction of a High Voltage Test Facility</u>
2012TD0454	<u>Power Grid Stability Protection against GIC Using a Capacitive Grounding Circuit</u>
2012TD0463	<u>Effects of GIC on Power Transformers and Power Systems</u>
2012TD0561	<u>Evaluation of Distribution Network Transformer Dissolved Gas Analysis (DGA) Data</u>
2012TD0590	FEM Analysis of the Transformer Insulation XY Model

3.4.2.2

2012 PES General Meeting (San Diego, CA July 23- 24, 2012)

A total of 12 papers were submitted. After review, 6 papers were presented in the Paper Session.

ID	Title
2012GM0281	Demagnetization of a Large Power Transformer Based on Calculation of the Flux Linkage
2012GM0693	Effects of Iron-Core Topology on Inrush Currents in Three-Phase Multi-Leg Power Transformers
2012GM0707	Interpretation of Dielectric Response Measurements of Transformer Insulation under Temperature Variations and Transient Effects
2012GM1155	A Study on Suitability of Different Transformer Winding Models for Frequency Response Analysis
2012GM1177	Multivariate Analysis for Correlations among Different Transformer Oil Parameters to Determine Transformer Health Index
2012GM1440	Solid State Transformer Specification via Feeder Modeling and Simulation

3.4.2 Upcoming Conference Papers Submitted for Review

2013 PES General Meeting

Unknown --The deadline for submission is in November 30 2012.

Changes to IEEE PES Conference Paper Rules

The IEEE PES explanation of these changes is published and can be reviewed at <http://pes-gm.org/2013/index.php/call-for-papers>.

3.4.3 Conference Paper Submission Requirements

The paper length has been reduced to 5 pages. Part 1 and Part 2 papers will not be permitted. The maximum paper length has been reduced to 5 pages. Part 1 and Part 2 papers will not be permitted

3.4.4 Conference Paper Presentations

There will be no Transformers Committee Paper Presentation sessions.

The majority of accepted conference papers will be scheduled for presentation at the Monday evening poster session. Presentation of an accepted paper at the conference is a requirement of publication. Any paper that is not presented at the conference will not be included in IEEE Xplore.

The top 60 to 80 accepted conference papers will be selected to be presented in a Conference Paper Session. Author(s) will be allowed 8 minutes to present their paper and will be allowed to use a maximum of 6 PowerPoint slides.

A few of the top 60 to 80 conference papers will be chosen and recognized as General Meeting Conference Prize Papers, during the Tuesday Awards dinner.

Transactions Paper Presentations

The PES Technical Committees will be selecting published Transactions papers for presentation at the 2013 General Meeting. An author of an accepted PES Transactions paper who is interested in presenting it at the 2013 PES General Meeting must upload the full paper, in addition to the paper's abstract, to the on-line submission and review site by the deadlines listed above. The appropriate Technical Committee Program Chair (TCPC) will determine if the topic of the paper is suited for presentation in one of the technical sessions.

3.4.5 Special Issue Transactions Paper Presentations:

Beginning in 2013, select papers from Special Issue PES Transactions will be presented at the PES General Meeting. The Special Issues have already been identified for 2013, but authors are encouraged to submit papers to future special issues. Information on planned Special Issue PES Transactions can be found at: <http://www.ieee-pes.org/calls-for-transactions>

3.4.6 Panel Sessions

The Transformers Committee will have the opportunity to sponsor panel session at future conferences. We have not yet considered this type of presentation at any future conference. Panelists will not be required to write summary papers to participate in panel sessions. Only PowerPoint presentations are required. Invited panelists are free to submit a conference paper on the topic they are asked to present, if they so choose, but it must be submitted to the on-line submission and review site by the conference paper submission deadlines listed above and it will be reviewed for acceptance under the same criteria as all conference paper submissions. Participation as a panelist does not guarantee that your conference paper submission will be accepted and published.

3.5.1 Membership Review

Name	Affiliation	Sponsor #1	Sponsor #2	Sponsor #3	Membership Category
Baitun Yang	Pennsylvania Transformer	Pierre Riffon WG Revision to Impulse Test (2+yrs)	Loren Wagenaar SC Dielectric Test (2+yrs)	Stephen Antosz SC Performance Characteristics (2+yrs)	Producer
Thomas Sizemore	ABB	Thang Hochanh TF PD in Bushings, PTs, CTs (2 yrs)	Ross McTaggart SC Instrument Transformers (1.5 yrs)	Ross McTaggart WG Requirements for Instrument Transformers (6 months)	Producer

The following table contains a count of the participants grouped by the three general categories.

Committee Member	211	210	218	182	182
Committee Member - Emeritus Member *	8	1	8	6	6
Committee Member - IEEE Life Member *	26	31	31	29	30
Committee Member - Corresponding Member	1	1	1	0	0
Total Committee Members	246	243	258	217	218

* - indicates this member type receives a discounted registration fee.

The participant's profiles in our AMS 123 system should reflect the correct status. It is the responsibility of each individual to keep his or her profile updated. Here is the link to our AMS 123 system. (<http://www.123signup.com/servlet/com.signup.servlet.org.ALogin?Org=ieee-transformers&Restart=1>)

3.5.2 New Member Applications

Six new applications for Committee Membership have been received since our previous meeting in Nashville. They will be submitted for approval at the Milwaukee meeting on October 21, 2012. Details of the membership applications and sponsors are listed in the following table.

Name	Affiliation	Sponsor #1	Sponsor #2	Sponsor #3	Membership Category
Jeremy A. Sewell	Quality Switch, Inc	Carl Nieman UTNP SC (7yrs)	Phil Hopkinson WG C57.157 DETC (7yrs)	Brian Klaponski WG C57.12.40 Network Xfmr(7yrs)	Producer
Robert T. Rasor	S.D. Myers, Inc.	Susan McNelly Insulating Fluids SC (3 yrs)	Richard Ladroga WG C57.104 DGA (7yrs)	Tom Prevost TF Furans (3yrs)	General Interest
David Archie Wallace	ABB/Kuhlman Electric	Loren Wagenaar Dielectirc Test SC (2 yrs)	Ross McTaggart Instrumnt Trans SC (2 yrs)	Pierre Riffon WG Rev to Impulse Tests (2 yrs)	Producer
Roberto Asano Junior	ABB	Don Platts/Bruce Forsyth Insulation Life SC (4 yrs)	Peter Zhao WG C57.156 Tank Rupture (2yrs)	Richard Marek WG C57.154 High Temp Insul (4yrs)	Producer
Brian R. Penny	American Transmission Company	Jane Verner PC57.152 Field Test Guide(4 yrs)	Dave ? WG PC57.139 DGA LTC(2 yrs)	Enrique Betancourt TV/Stabilizing Wdg (1 yrs)	User
Subhas S. Sarkar	Virginia Transformer Corp	Sheldon Kennedy WG C57.12.52 (2 yrs)	Tim Holdway WG C57.12.01 (2 yrs)	Chuck Johnson Dry Type SC (>2 yrs)	Producer

The Committee welcomes and encourages active participants to become Members of the Committee. Requirements and application forms can be found in the Organization and Procedures (O&P) Manual, accessible on the Committee website. Subcommittee Chairs are encouraged to recommend new members, and to communicate the process of attaining membership through **active participation** and **contribution** in Committee work at the WG and SC level. WG and SC Chairs are reminded also that signing an application sponsoring a new member signifies their sponsorship that the applicant has met the requirement of membership and active participation for at least one year in the WG or SC they Chair. New member applications may be submitted to the Committee Secretary's attention at any time. Applications will be collected for review and approval in batches at each Administrative Subcommittee meeting. For an application to be reviewed at the next meeting, the application will need to be received by the Committee Secretary a minimum of one week prior to the start of that meeting.

3.5.3 Committee, Subcommittees, and Working Group Rosters

In order to provide indemnification to working group and subcommittee members it is crucial that membership lists be maintained. Our AM system has these functions built-in to ease these administration tasks. It is important that each subcommittee and working group chair keep the rosters updated so that this information can be provided to the IEEE SA.

A similar main committee roster has also been developed to track attendance for the Main Committee meeting on Monday & Thursday. The data will be used to update participant's membership profile.

3.5.4 IEEE/PES and IEEE/SA Membership Requirements

As a reminder, all members of the Transformers Committee must also be members in good standing of the Power & Energy Society (IEEE/PES) and the Standards Association (IEEE/SA). There are a number of Transformers Committee members who have lapsed and must renew their SA and/or PES affiliation. These memberships are renewed annually along with your IEEE Membership renewal, which typically occurs at the end of each year.

Reminder that WG Chairs must also be a member of the SC, PES, and SA.

There are a number of Transformers Committee Members who are not PES or SA members. They will be given a reminder to renew these required memberships. If they do not comply then they will be dropped as Members. It is not fair to the other Members who adhere to this rule and pay the annual fees. Moreover, a person CANNOT participate in any ballot activity if they are not an SA member, and this is one of the basic responsibilities of an active member.

3.5.5 Consistent Guidelines for Membership Maintenance

Due to varying application of removal of members from individual SC's & WG's, the Administrative Subcommittee will develop some guidelines for consistent application. The Transformers Committee Secretary will create a first draft and circulate to the Admin Members for comment. It was requested that each SC Chair forward to the Secretary whatever rules they have been using in their own groups.

3.5.6 Essential Patent Claims

The Transformers Committee is now asking each participant at the time of meeting registration if they are aware of an essential patent claim, and if so to provide details. An Essential Patent Claim is any Patent Claim the use of which was necessary to create a compliant implementation of the IEEE Standard when there was no commercially and technically feasible non-infringing alternative. In other words, if an IEEE Standard REQUIRES the use of a product or process that is already patented, then this could be an essential patent claim. For this Milwaukee meeting there were nine people who answered YES that they were aware of a potential essential patent claim. Four of the nine provided no details and were therefore not considered any further. The other five were reviewed and it was determined that they DO NOT have an essential patent claim. If they did, they would be instructed to have the patent holder's legal team file a Letter of Assurance (LOA) with the IEEE-SA Standards Board Patent Committee. There is a link to this information on the transformerscommittee.org website.

3.5.7 Meeting Minutes

The minutes of the Nashville Transformers Committee meeting Spring, 2012 were posted to the committee website on June 25, 2012.

Subcommittee Chairs are requested to submit their SC Minutes from the Milwaukee meeting by December 15, 2012.

The minutes should be submitted via e-mail to the Committee Secretary, Stephen Antosz at [santosz@ieee.org], with a copy to Susan McNelly [sjmcnelly@ieee.org] for posting on the Committee website.

The submittal file should be saved as a Word document and should be formatted similar to this report, and as shown in the recent assembled Minutes. *The numbering for your report should match the numbering as indicated in the Main Committee Meeting Agenda.* Please indicate total attendance count for each Subcommittee, Working Group, and Task Force meeting in your Minutes. Please do not send a copy of the attendance listing for this attendance count.

Your full corporation and support in this matter is greatly appreciated.

3.6 Treasurer's Report – Greg Anderson

The finances of the Committee are in excellent condition. As of September 1, 2012 (end of this reporting period), the balance was \$56,563.01. There were no assets (PC projectors, etc.) purchased during this reporting period. There was a small gain during this reporting period. See below "balance sheet".

IEEE/PES TRANSFORMERS COMMITTEE		
Treasurer's Report - Fall 2012		
(for reporting period 02/23/2012 to 09/01/2012)		
AAAAA	Balance before Fall 2010 Meeting, as of 10/01/2010	\$57,971.42
AAAA	Balance before Spring 2011 Meeting, as of 02/28/2011	\$62,807.57
AAA	Balance before Fall 2011 Meeting , as of 09/27/2011	\$60,022.97
AA	Balance before Spring 2012 Meeting , as of 02/22/2012	\$47,864.80
	<u>Misc Income, not meeting related</u>	
	-- interest, approx 6 months	\$152.42
	-- misc income (polo shirt sales, CD-ROM sales, book sales, etc.)	\$400.00
B	Total Misc Income, not meeting related	\$552.42
	<u>Misc Expenses, not meeting related</u>	
	-- 123Signup subscription fee, for 2 quarters	\$1,758.00
	-- awards	\$3,470.75
	-- equipment purchases, major assets (projectors & cases, etc.)	\$0.00
	-- technology (mobile app, cables, etc)	\$225.00
	-- conferences, remote meetings, etc.	\$2,984.53
	-- other misc expenses (polo shirts, CD-ROMs, books, etc.)	\$0.00
C	Total Misc Expenses, not meeting related	\$8,438.28
	<u>Fall 2011 Meeting</u>	
	-- late income, meeting registrations (rolling reserve paybacks)	\$0.00
	-- misc late income (incentives, late sponsor contributions, etc.)	\$0.00
	-- late meeting expenses	\$0.00
D	Total Late Income/(expenses), Fall 2011 Meeting	\$0.00
	-- reported prelim. gain/(loss), as of 02/22/2012, from previous Treasurer's Report	\$6,466.59
	<u>Actual</u> Gain/(Loss), Fall 2011 Meeting	\$6,466.59
	<u>Spring 2012 Meeting</u>	
	-- income, meeting registration	\$151,549.24
	-- income (coffee break sponsors)	\$3,000.00
	-- meeting expenses	\$137,965.17
E	Subtotal Income, Spring 2012 Meeting, between 02/23/2012 and 09/01/2012	\$16,584.07
	-- meeting expenses, before 02/23/2012, from previous Treasurer's Report	\$82.37
	<u>Preliminary</u> Total Gain/(Loss), Spring 2012 Meeting	\$16,501.70
	<u>Expenses, Future Meetings (deposits, etc)</u>	
	-- meeting expenses, Fall 2012 Meeting	\$0.00
	-- meeting expenses, other future meetings	\$0.00
F	Total Expenses, future meetings, paid between 02/23/2012 and 09/01/2012	\$0.00
G	Net Income, between Spring 2012 and Fall 2012 meetings (B - C + D + E - F)	\$8,698.21
A	Balance before Fall 2012 Meeting , as of 09/01/2012 (AA + G)	\$56,563.01

3.7 Recognition and Awards Report – James Edward Smith

3.7.1 Committee Certificates of Appreciation

Transformers Committee Certificates of Appreciation have been obtained, with approval of the PES Awards & Recognition Chair, for the following Award recipients:

3.7.1.1 General Service Awards

H. Jin Sim	Host - Fall 2012 Meeting, Milwaukee, WI
SPX Transformer Solutions	Host Company - Fall 2012 Meeting, Milwaukee, WI
Richard Dudley	Chair, HVDC Subcommittee
Loren Wagenaar	Chair, Dielectric Test Subcommittee
?	Distinguished Service Award

3.7.1.2 Task Force Service Awards

Task Force on IEC Comparison

H. Jin Sim	Chair, Task Force on IEC Comparison
------------	-------------------------------------

Task Force on Instructions for IEC Coordination

Jeewan Puri	Chair, Task Force on Instructions for IEC Coordination
-------------	--

Task Force on Stabilizing Windings

Enrique Betancourt	Chair, Task Force on Stabilizing Windings
Richard Amos	Contributing Member, Task Force on Stabilizing Windings
Xose Lopez-Fernandez	Contributing Member, Task Force on Stabilizing Windings
Sanjay Patel	Contributing Member, Task Force on Stabilizing Windings
Vallamkonda Sankar	Contributing Member, Task Force on Stabilizing Windings
Krishnamurthy Vijayan	Contributing Member, Task Force on Stabilizing Windings

Task Force on Dielectric Frequency Response

George Frimpong	Chair, Task Force on Dielectric Frequency Response
Peter Werelius	Contributing Member, TF on Dielectric Frequency Response
Diego Robalino	Contributing Member, TF on Dielectric Frequency Response
Mario Locarno	Contributing Member, TF on Dielectric Frequency Response
Mary Foster	Contributing Member, TF on Dielectric Frequency Response

Task Force on DVP Grid Transformers

Dr. Hemchandra Shertukde	Chair, Task Force on DVP Grid Transformers
Matthieu Sauzay	Vice Chair, Task Force on DVP Grid Transformers
Alexander Levin	Secretary, Task Force on DVP Grid Transformers

3.7.2 IEEE SA Standards Board Awards

In addition to the Committee Awards above, the IEEE SA SB presents its own Award to the WG Chair upon publication of a new or revised document, and offers the WG Chair the opportunity to nominate significant contributors to the project for an IEEE SA SB Certificate of Appreciation.

IEEE SA Award Recipients:

C57.91 IEEE Guide Loading Mineral-Oil-Immersed Transformers

Don Duckett	WG Chair, C57.91
Carl Arpino	WG Vice Chair, C57.91
Susan McNelly	WG Secretary, C57.91
Peter Balma	Outstanding Contributor C57.91
William Bartley	Outstanding Contributor C57.91
Bruce Forsyth	Outstanding Contributor C57.91

C57.131 IEEE Standard Requirement For Tap Changers

William Henning	WG Chair, C57.131
Craig Colopy	WG Vice Chair, C57.131
Alex Kraemer	Outstanding Contributor C57.131
James Harlow	Outstanding Contributor C57.131

C57.12.40 IEEE Standards for Requirements For Secondary Network Transformers

Brian Klaponski	WG Chair, C57.12.40
Larry Dix	Outstanding Contributor C57.12.40
Giuseppe Termini	Outstanding Contributor C57.12.40

C57.16 IEEE Standard for Requirements, Termonology, and Test Code for Dry-Type, Air-Core Series Connected Reactors

Richard Dudley	WG Chair, C57.16
Pierre Riffon	Outstanding Contributor C57.16

C57.154 IEEE Standard for the Design, Testing and Application of Liquid-immersed Distribution, Power and Regulating Transformers Using High Temperature Insulation Systems and operating at Elevated Temperatures

Richard Marek	WG Chair, C57.154
Waldemar Ziomek	WG Vice Chair, C57.154
H. Jin Sim	Outstanding Contributor C57.154
Gary Hoffman	Outstanding Contributor C57.154
Roberto Asano	Outstanding Contributor C57.154
John Luksich	Outstanding Contributor C57.154
Hasse Nordman	Outstanding Contributor C57.154
Radoslaw Szewczyk	Outstanding Contributor C57.154

C57.143 IEEE Guide for Application for Monitoring Equipment to Liquid-Immersed Transformers and Components

Donald Chu	WG Chair, C57.143
Andre Lux	WG Vice Chair, C57.143
Tony Pink	Secretary, C57.143
Brian Sparling	Outstanding Contributor C57.143
Claude Beauchemin	Outstanding Contributor C57.143

C57.12.91 IEEE Standard Test Code for Dry-Type Distribution and Power Transformers

Derek Foster	WG Chair, C57.12.91
Robert Ballard	Outstanding Contributor C57.12.91
Marcel Fortin	Outstanding Contributor C57.12.91
Mark Gromlovits	Outstanding Contributor C57.12.91
Timothy Holday	Outstanding Contributor C57.12.91
Roger Wicks	Outstanding Contributor C57.12.91

3.7.3 IEEE Standards Association (SA) Awards and Recognition

The IEEE SA sponsors additional awards besides the WG Chair Awards reviewed above. Discussion of these awards can be found on the IEEE SA Awards web pages (<http://standards.ieee.org/sa/aw/>). Note particularly the IEEE SA Standards Medallion. Excerpting from the website: “The Standards Medallion is awarded for major contributions to the development of standards. Examples of such contributions may include leadership in standardization of new technologies, assuring achievement of standards development goals, identifying opportunities to better serve the needs of standards users or other such contributions viewed as deserving of this award...” Please review, and if you have suggestions for nominations see our Committee Awards Chair.

2012 Standards Medallion Award

We are very pleased to announce that Mr. Phillip Hopkinson has been nominated by the Transformers Committee and will receive a Standards Medallion award for his many accomplishments and years of dedicated service to the Transformers Committee, IEEE, PES and our industry as a whole.

3.7.4 PES Transformers Committee Distinguished Service Award

We will continue to present our PES Technical Committee Distinguished Service Award each year to one of our members who is recognized by his peers as having contributed significantly and consistently to Committee Standards activities. Excerpting from the PES Awards website: “Each Technical Committee is encouraged to make one award for outstanding service. This personal recognition acknowledges the efforts of those individuals whose sustained performance, over many years, has contributed to the advancement of the committee technology.” Please see the Awards Chair if you have suggestions for future recipients. We are seeking nominations for this award.

3.7.5 PES Working Group Recognition Awards

In addition to the Technical Committee distinguished service Awards, PES sponsors Working Group Recognition awards. The awards are related to “outstanding and timely” publications of technical reports, or of standards and guides. Excerpting from the PES website (<http://www.ieee.org/portal/site/pes/>) Awards pages:

“The PES Working Group Recognition Awards recognize “the most outstanding and timely publications” by a PES Working Group (or Committee or Subcommittee) from among the nominations. The PES Recognition Award is divided into two categories: 1) for technical reports; 2) standards and guides. Each Technical Council Committee may nominate one report from each category, published by IEEE, during the previous three year period.” This award consists of a plaque which will be presented to the Working Group Chair at the PES Summer Meeting Awards Luncheon. A framed certificate will be presented to each Working Group member at a designated meeting of the parent Technical Committee.

3.7.6 Transformers Committee Meritorious Service Awards

There is also a process of additional recognition for Meritorious Service and Outstanding Contributions to the Committee. Suggested qualifications have been developed from a review of similar awards presented by other IEEE Technical Committees or Societies. General examples for qualification for the awards include the following:

- To recognize continuing exemplary service in notable technical contributions to multiple Committee projects/documents over a sustained period of time
- To recognize an achievement of major value and significance to the Committee. The achievement can be a specific, concisely characterized accomplishment, as opposed to a collection of different efforts.
- As with the IEEE Education Society Meritorious Service Award – “to recognize pioneering contributions to the administrative efforts of the Society over a period of years, as evidenced by dedication, effort, and contributions.”

If you have any additional thoughts on qualifications for Meritorious Service Awards, and if you have potential nominees to suggest, please contact me. Award nominees will be reviewed by the Awards Chair and the SC Officers.

3.7.7 Member Certificates

All Framed Transformer Committee Membership Certificates will be available for distribution during our Milwaukee meeting. All Transformers Committee members should make sure to pick-up your certificate sometime during the Milwaukee meeting. If you know of any member that is not present in Milwaukee and you have the ability to deliver his/her certificate, please consider taking it to them.

This program is one small way of recognizing your support for the Committee. The Certificates represent the appreciation of the Committee, and of your Committee Officers, for your service to the Committee, to IEEE, and to our Industry. We hope you will display your Membership Certificate proudly at your place of business, and encourage others to join us in our work.

3.7.8 Nominations for IEEE, PES, and Technical Council Awards

Regarding IEEE Fellow Nominations, we need to think about nominations for 2013. Borrowing from the IEEE Awards web page . . .

(http://www.ieee.org/web/membership/grade_elevation/grade_elevation.html): “The grade of Fellow recognizes unusual distinction in the profession and shall be conferred only by invitation of the Board of Directors upon a person of outstanding and extraordinary qualifications and experience in IEEE-designated fields, and who has made important individual contributions to one or more of these fields.” Nominations, including references by at least five present IEEE Fellows and optional additional endorsements, must be completed and submitted by March 1 of each year for the following year’s Class of Fellows.

3.8 Meeting Planning Report – Greg Anderson

No report.

3.8.1 Milwaukee Meeting

No report.

3.8.2 Future Meetings

No report.

3.9 Standards Report – Bill Bartley

The report was presented and discussed. It is extensive. See website for report.

3.10 IEEE Staff Update – Erin Spiewak

IEEE/IEC Updates

- The PAR for the joint revision of IEC 60076-16 - Standard Requirements for Wind Turbine Generator Transformers, was approved in June 2012. There will be a working group meeting on Tuesday, 23 October at 9:30 am. More information as to the status of the joint working group will be discovered at that meeting and the lunch meeting with Paul Jarman on Wednesday, 24 October.

- The PAR for 60076-57-1202 - Standard Requirements for Liquid Immersed Phase-Shifting Transformers, was approved in June 2012. There will be a meeting during the Transformers meeting series on Tuesday, 23 October at 11:00 am. The New Work Item Proposal has passed in IEC - it was necessary to find a member from the US National Committee to participate in the project in order for the NP to pass and that member has been found.

- At the last Subcommittee meeting of HVDC Converter Transformers and Smoothing Reactors, there was a discussion of possible merging IEEE C57.129 with IEC 61378-2. Jodi notified both Paul Jarman and Bill Chiu of this interest and this will be discussed at the subcommittee meeting. Jodi will be in attendance at that meeting.

Central Desktop -- New Online Collaboration Tool

- Presentation at Monday Luncheon
- Help Working Groups plan projects
 - Document editing and sharing
 - MS Word Plug-ins

3.11 Old Business

3.11.1 Corresponding Members and Quorum – Stephen Antosz

Corresponding members do not count towards quorum (in numerator or denominator) if not present at a meeting. Corresponding members do count towards quorum (in numerator or denominator) if present at a meeting.

Steve will develop some guidelines for member removal, and circulate to the members for comment, in an effort to apply consistent removal rules across all SC and WG's.

3.11.2 WG Data – Confidentiality, Storage, Access, & Use – Susan McNelly / Erin Spiewak

Motion by Stephen Shull to endorse a plan (to be determined later) as a committee to upload valuable intellectual property to an IEEE folder to be controlled through Chair, Vice-Chairs, and the webmaster of TC. Seconded and approved.

3.11.3 Access to Tutorial Presentations & Copyright release - TBD

Should we give technical presentations to PES website so they can sell? After discussion we decided No. They need copyrighted; plus we lose ownership. We will put on our TC website, behind password protected wall.

Bill Chiu will continue to exchange correspondence with PES staff to determine if there is any new path forward. So we will continue our current course, and await an official reply from the PES Resource Center.

3.11.4 GMD/GIC Position Paper – Ramsis Girgis/Bill Chiu / Don Platts

As a follow up to the discussion at the Transformers Committee meeting in Nashville back in March 2012, the concerns expressed by the members of the Transformers Committee GMD Taskforce members in regards to the IEEE Spectrum article published in February 2012 were elevated to the officers of the PES Technical Council and the representatives of the various technical committees. Many of the other PES technical committees also expressed similar concerns. Upon further dialogues over the course of several months leading up to the PES General Meeting at San Diego in July, the PES Technical Council expressed interested in having a coordinated response.

3.11.5 Committee O&P, WG P&P Manual Update – Peter Balma

- IEEE – SA approved new baseline documents for preparation of P&P for sponsors and working groups.
- Will utilize these to develop new draft of P&P and working group P&P before the end of the year.
- P&P highlight - expectation for minutes
- The minutes shall record the essential business of the working group, including the following items at a minimum:
 - Name of group, Date and location of meeting
 - Officer presiding, including the name of the secretary who wrote the minutes
 - Attendance, including affiliation , Call to order, Chair's remarks
 - Approval of minutes of previous meeting, Approval of agenda
 - Technical topics
 - Brief summary of discussion and conclusions
 - Motions, including the names of mover and seconder
 - Items reported out of executive session, Next meeting--date and location

3.12 Subcommittee Reports

Subcommittee	Report	Hot Topic
Bushings – P. Zhao		Need Standard for Distribution Transformer bushings
Dielectric Test – L. Wagenaar		DFR TF was in PCS and is now in Diel Test. Peter Werelius was Chair but he is an equipment manufacturer, so will be Vice-Chair instead.
Distribution Transformers – S. Shull		
Dry Type Transformers – C. Johnson		
HVDC – M. Sharp		
Instrument Transformers – R. McTaggart		Have too many manufacturers and not enough users on WG for PD requirements for MV IT's.
Insulating Fluids – S. McNelly		
Insulation Life – B. Forsyth		
Performance Characteristics – E. teNyenhuis		New TF for transient interactions in medium or high voltage applications
Power Transformers – T. Lundquist		New WG for dual logo joint development Standard Requirements for Phase Shifting Transformers
Underground Transformers & Network Protector – C. Niemann		
Standards SC – Bill Bartley		New TF for consistency of fluid terminology to write white paper

3.13 New Business

3.13.1 Meeting Schedule – Monday/Thursday General Session & Tutorial Sequence – S. Antosz/G. Anderson

There was some discussion about moving Part 2 of the General Session to be BEFORE the tutorials instead of AFTER. It was decided to keep the current schedule for one or two more meetings and then reevaluate. We don't want to lose people from the tutorials since the presenters go to great efforts to prepare the tutorials.

3.13.2 Chair Liaison Appointments

- Ned Edwin Brush is appointed liaison to Standards Coordinating Subcommittee SCC18.
- Raj Ahuja is appointed liaison to CIGRE.
- Tom Prevost is appointed as unofficial liaison to ASTM D9 insulating fluids

3.13.3 Committee History & Awards Update – Peter Balma

- On Tuesday at 9:30 AM there will be a meeting to discuss Transformer Committee History.
 - Review of history collected to date
 - Assess interest to continue to meet and to seek members interested in digging in or contributing to our history
 - Solicit input and confirmation of history by those present
 - Awards
 - Transformer Committee fellows
 - 1912 – 1913 first, 79 total to date, approx. 65% confirmed
 - Collecting all award history
 - Posting of awards
 - Observation other PES committees & awards

3.14 Adjourn

Yes