

**Administrative Subcommittee of the
Transmission and Distribution Committee
Detroit, Michigan
Thursday, July 29, 2011, 08:00 to 11:00
Marriot - Marquette**

1. Introductions

Meeting called to order by Bill Chisholm at 8:05 AM. Introductions followed. There 8 members and 3 guest (IEEE-SA) present.

2. Previous Meeting Minutes

Review and Approval of July 29, 2010 Meeting Minutes (minutes approved with one correction)
Eballots

- 15 Dec 2010 – **Approve** Dan Sabin as Technical Committee Program Coordinator
- 3 Jan 2011 - **Approve** Andrew Phillips, Chair of Lightning and Insulator Subcommittee
- Discussion and agreement in principle to merge Insulator to TP&C (new SC will be TPCI)
 - o With merger, better coordination of meeting schedules.
 - o Will need to review and change scope.
 - o Will allow more crossover between the groups
- For now (discussion later in meeting) leave Lightning as small subcommittee
- 25 May 2011 – **Approve** Richard Collins, Chair of Towers, Poles and Conductors Subcommittee

3. Chairman's Report

Current Meeting

- Attended TC & TCOP meetings
- IEEE Audit committee – language in process and procedures manual, reference to standards in operations and procedures manual.
- P&P template from switchgear committee is approved.
- O&P manual – existing comments to be formatted into two pieces.
- All can copy / adapt O&P manual to point to the P&P regarding standards.
- Technical Council will have responsibility for P&P rather than WGs doing standards

Committee Membership - Updated Roster

Standards

- Reaffirmation process will no longer exist after Jan 2012.
- Standards will have a ten year life.
- Standards may be Revision, Amendment/Corrigendum or Withdrawal status.
 - o If no changes made to revision, then old date will be kept.
- New resolution comments will be: Accept, Reject or Revise.
- Positive aspect – ability to fix typos/errors noted during balloting that are now impossible to fix in the reaffirmation process.
- Policy on interpretations – IEEE no longer issues interpretations.
- Entity (Corporate SA membership) standards are a new possibility including P1860,1861,1862

Organization and Procedures Manual Update - Version 4

Incorporation of IEEE Standards Operating Procedures into Working Groups

Review of Objectives achieved and Advice Going Forward

- Invite local chapter / have experts go a day early and make a presentation at subcommittee, coordinated with single point of contact via email to PES Chapters, presently Malina Selak.
- One paper session, five combo sessions, eleven panel sessions
- 58 papers

- Chair encourages further development of Working Group papers – these tend to be cyclic, in lead of future standards development.
- TC will post any document out of a WG that wants a wider distribution.
- Meetings & Marketing is requesting more material for the PES Store
 - o Examples are tutorials, white papers, WG papers....
- Consent and release form and keywords needed to put WG documents on PES site; all three prices can be set to zero.

123signup used by other committee's for registration for their meetings.

CIGRE/IEEE cooperation meeting held at this meeting

- o Both organizations want more cooperation
- o There is already good cooperation within the SC/WG level
- o There is no CIGRE link in Xplore, though

4. Awards

T&D Committee - IEEE Fellow Recipients – need more applicants.

Technical Committee Prize Paper Award - None

Technical Committee Distinguished Service Award

- Dick Hensell

Technical Committee Working Group Recognition Award

- Lee Taylor, Distribution Award

IEEE Fellow Nominations – Reminder, Endorsers Cannot Evaluate

-Please nominate worthy candidates for these awards!

5. Future Meetings

Room setups of 25 or more were set up in theatre configuration rather than committee format. This was announced rather late (8 July 2011). Did this adversely affect the T&D committee work?

Having TV in room with digital input was an asset in the smaller rooms (suites on 65th & 66th floors), better in fact than a projector for the room size.

Most groups made due, but the setup was not optimal or conducive for free flowing discussions. ESMOL was able to get their meeting rooms reconfigured.

Don't schedule meetings at Hogwarts!

6. New Business

TPCI - DC line design – guide / series of guides; EPRI book, WG formed to develop an initial guide.

Overhead Lines – matching CIGRE

HVDC/FACTS: CIGRE 2005 compendium / IEEE summary 4 pages of rating, length of line, voltage as PDF on-line. Find out who maintains CIGRE, consider merge, consider link of PES resource site.

7. Officer Rotation

The normal rotation of ADCOM officers will occur at the end of 2011. Positions needing reappointment or officer rotation include:

- Vice Chair – Standards
 - o Possibilities to recruit: Jerry Redding (TPC), Jeff Nelson (TechCouncil) or consider this function to be fulfilled in the PAR stage.
- Subcommittee Chairs:
 - o HVDC and FACTS Subcommittee Chair
 - Ben Mehreban, vice chair, is interested in taking the chair.
 - o Distribution Subcommittee Chair
 - John McDaniel proposed by SC

- Accepted to December 2014
- ESMOL Subcommittee Chair
 - See email report; new chair may be confirmed at TPC/ESMOL meeting next February.
- General Systems Subcommittee Chair
 - Juan Martinez accepted as new chair of GS Subcommittee.
- PQ Subcommittee Chair
 - Tim Unruh (DOE) is approved to take chair effective Jan 2012
 - Rich Bingham, secretary, will become vice chair
- Integration of Renewable Energy into the Transmission and Distribution Grids – defer to end of 2012 as Ernst Camm was appointed 8 Sept 2009 ?

8. Subcommittee Reports of Items Needing ADCOM Action

8.1 Capacitors

- The new officers (start of 2011) for the Capacitor Subcommittee include Tom Grebe (Electrotek) as Chair, Richard Sevigny (Hydro Quebec) as Vice Chair, and Mike Hulse (BPA) as Secretary.
-
- The subcommittee website and membership roster were updated during the first quarter of 2011.
-
- IEEE Std 1036-2011 (Shunt Capacitor Application Guide) was completed and published. It is now available for sale on the standards website.
-
- IEEE Std 18 (Shunt Capacitors) draft 10 was completed. The standard will be balloted before the 2012 JTCM.
-
- P1726 – A new standard (Guide for the Functional Specification of Fixed Transmission Series Capacitor Banks) for series capacitor applications (coordinated with SPD and Switchgear Committees), is nearing completion and will be balloted before the 2012 JTCM.
-
- A new working group is completing a paper dealing with Reactor Applications for Capacitor Switching Technologies.
-
- The subcommittee had 5 meetings at the General Meeting with attendance between 15 to 30. There were a number of new members in attendance. A technical presentation on capacitor unit testing was made by Richard Morin of Hydro Quebec. The subcommittee is planning to meet at the 2012 JTCM.

8.2 DC and Flexible AC Transmission

8.3 Distribution

- The Distribution SC met in Detroit. There were 9 WG/TF meetings held with an average attendance of 40 members.
-
- John McDaniel was elected as the new chair of the subcommittee and Julio Romero Aguero (Quanta) was elected as the vice chair. Both were effective immediately. Cheri Warren stepped down early due to other commitments.
-
- Rodney Robinson (Westar Energy) was selected as the new chair of the Distribution Reliability WG. Val Werner (We Energies) was appointed as the new secretary.
-
- Rich Christie (Univ. Washington) was selected as the new secretary of the Switching and Overcurrent WG.

- IEEE Standard 1656 – IEEE Guide for Testing the Electrical, Mechanical, and Durability Performance of Wildlife Protective Devices on Overhead Power Distribution Systems Rated up to 38kV was approved by IEEE-SA.
- IEEE Std 1366 will be going to ballot later this year for revision. It is planned that P1782 will be going to ballot in 2012.

8.4 Engineering in the Safety, Maintenance and Operation of Lines

- The ESMOL Subcommittee met at the PES General Meeting in Detroit, MI. There were 10 WG/TF meetings with an average attendance of 10 members.
- Regarding the Officer Rotation for the time being Tom Buonincontri will remain as Chair. The Subcommittee is searching for a replacement.

8.5 General Systems

- Administrative Changes, as of Jan. 2012: Subcommittee Chair Dr. Juan Martinez.
- Working Group Chair on Modeling and Analysis of System Transients using Digital Programs: Dr. Albert J. Keri
-
- General Systems WG on Distributed Resources: Modeling and Analysis - Chair: Prof. P.W. Lehn, University of Toronto
- The WG met on Monday July 25, 2011 and there were 19 attendees. The task force is running a panel session on Thursday entitled: Computational Tools and Models for Integration of Distributed Energy Resources.
- The WG currently oversees the following three active task forces:
- TF on analysis tools for distributed resources – Chair: Dr. Juan Martinez
- TF on rotating machine coupled distributed – Chair: Phil Barker, Co-Chair: J. Jatskevich
- TF on power electronically coupled distributed resources – Chair: Dr. Amirnaser Yazdani
- The first task force deals with load flow techniques and models for systems containing distributed resource, it is preparing 2 papers.
- The second and third task forces have narrowed their focus to dealing dominantly with electromagnetic transients type models for distributed resources. Four papers are under development within these two task forces.
-
- Working Group on Modeling and Analysis of System Transients using Digital Programs
- Chair: J. A. Martinez-Velasco
- Met on Tuesday July 26, and there was 30 attendees. The WG currently oversees the following five active task forces:
- TF on Modeling of Induction Machines
- TF On Frequency Domain Methods for Transient Studies.
- TF on Dynamic System Equivalents
- TF on Portable Data & Modeling for Electromagnetic Transient Analysis Programs
- TF on Dynamic Average Modeling Techniques
- A new TF to be added on RTDS Comparisons. Many papers have been published and many are being prepared for publications, including those for Power & Energy journal.
-
- Working Group on Field Measured Overvoltages and Their Analysis
- Chair: Randy Horton EPRI
- Met on Monday night (8 attendees) and on Tuesday July 26 (20 attendees). Excellent information is being provided and a Panel Session is being planned.
-
- WG On Superconductivity T&D - Products, Application & Analysis
- Chair: Brian K. Johnson
- Met on Tuesday July 26 (6 attendees). Panel Session is being planned.
- WG Practical Aspects of Ferroresonance

- Chair: Bruce Mork
- Met on Tuesday July 26 (5 attendees). Excellent information is being provided and a Tutorial and / or Special Publication are being planned within the next two years.
- WG on Geomagnetic Induced Current (GIC)
- Chairman: John Kappenman
- First Meeting on Wed. July 27, 2011. Attendees: 20
- Objective: To exchange and develop information on all aspects of how geomagnetic storms could interact with and impact electric power systems. This would include advanced methods for modeling the storms and how they interact with the exposed power grids, analysis of geomagnetic storm impacts to power networks and equipment, methods of mitigation of geomagnetic storm impacts to power grids, methods of improved forecasting and situational awareness of geomagnetic storms and their impacts to power grids, and development of standards in related areas to better characterize storm environments, impacts and mitigation.
-
- One or two Panel Session is planned for GM 2012

8.6 Integration of Renewable Energy into the Transmission and Distribution Grids

- Renewable Subcommittee is meeting at GM on Thursday July 28, 2011.
- Michael Starke, new chair of the Wind and Solar Plant Collector System Design WG will report on WG activities, including:
 - Panel session on Wind Plant Collector System Design 3.0.
 - New WG papers planned for presentation in a panel session at T&D 2012 in Orlando.
 - The activities of the new TF on “Wind Farm Collector System Grounding for Personal Safety.”
 - Plans to attend major solar power conferences.
 - New WG titled “Wind and Solar Power Plants: System Impacts and Interconnection Requirements” sponsored a panel session on “Standards and Interconnection Requirements for Wind and Solar Generation” and a super session on “Wind & Solar”. A panel session is planned for T&D 2012.
 - The Joint WG on Wind Plant Short-Circuit Contributions sponsored a panel session on “Wind Plant Short-Circuit Contributions”. The same session, with 2 additional presentations, is planned for T&D 2012.
- Next meeting is planned for T&D 2012 in Orlando.

8.7 Lightning and Insulator

8.8 Power Quality

- **Working Group on Harmonics**
 - IEEE 519 Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems
 - Working to have a vote and/or extension to IEEE 519 before December 31
 - Writing a tutorial paper with a survey of spectral, time-frequency and probabilistic techniques for dealing with harmonics
 - Proposing to Write Tutorial Paper on Aggregation of Harmonics Caused by Wind and PV Systems
 - Planning to begin IEEE P519.1 Application Guide balloting in 2012
-
- **Working Group on Voltage Quality**
 - IEEE 1250 Guide for Service to Equipment Sensitive to Momentary Voltage Disturbances
 - The guide was approved this spring. Presenting a summary of the standard during a Wednesday afternoon panel session.

- Discussed taking on a “black box” testing protocol for retrofit energy savings devices.
 - IEEE P1564 Guide for Voltage Sag Indices
 - Formed ballot pool and will submit most recent draft for MET by IEEE Standards next week. Expects first ballot within months.
 - IEEE P1564 Recommended Practice for Measurement and Limits of Voltage Flicker on AC Power Systems
 - Administratively withdrawn about 18 months ago via oversight, but was since balloted twice is waiting for final approval by IEEE Standards. Based on IEC 61000-3-15 Revision 2.
 - Starting a new project (P1453.1) to adopt IEC 61000-3-7 as an IEEE standard with balloting expected to begin before end of year.
 - Planning a new project (P1453.2), which would be an Application Guide with start in 2012
-
- **Working Group on Monitoring Electric Power Quality**
 - IEEE 1159 Recommended Practice for Monitoring Electric Power Quality
 - Revised and published in 2009.
 - Discussing whether next steps will be a revision to IEEE Std. 1159-2009 or to reform IEEE P1159.1
 - Will focus on a white paper on power quality phenomena not discussed already in Std 1159
-
- **Working Group on Power Quality Solutions**
 - IEEE P1409 Guide for the Application of Power Electronics for Power Quality Improvement on Distribution Systems Rated 1 kV Through 38 kV
 - Completed first ballot and addressed negative votes at this meeting
 - Expects to rebalot within weeks.
 - IEEE 1346 Recommended Practice for Evaluating Electric Power System Compatibility with Electronic Process Equipment
 - Withdrawn and no action yet within working group to write a replacement standard
-
- **Working Group on Power Quality Activities**
 - Panel Sessions for GM 2012
 - “Alternative Uses of PQ Data” chaired tentatively by Wilsun Xu
 - “Theories, Experiences, and Practice with Waveform Distortion Assessment” chaired by Gary Chang and Roberto Langella
-
- **Working Group on ICHQP**
 - International Conference on Harmonics and Quality of Power
 - Planning next conference for Hong Kong from June 17-20, 2012

8.9 Towers, Poles and Conductors

- Five task force meetings (Std IEEE 524, Smart Grid Monitors, Practical Vibration, Material & HW, Stds. IEEE 738 & IEEE 1238) were held on Sunday afternoon.
- Seven Working Groups (Line Design Methods, Overhead Conductors & Accessories, Construction of OH Lines, Line Structural Material & Hardware, Corona & Field Effects, Corrosion Management, Management of Existing OH Lines) met throughout the week. Average attendance was about 40. This is down from prior meetings. The NESC committee did not meet as the new 2012 code was just released and no new business was necessary.

- A special technical session on Corrosion was held on Monday afternoon. Neal Murray (Corrosion WG Chair) organized and ran the 4 hour class.
- A general theme in many of the working groups was the NERC Alert that many utilities are struggling with currently. Presentations related to the NERC alert included "Clearances for Thermal Line Ratings Based on LiDAR Survey of Existing Lines: Survey Tolerance Adders", "Meteorological Data Supporting LiDAR Surveys", "IEEE 738 and LiDAR Accuracy", "Estimating Conductor Temperature with IEEE 738 during LIDAR Measurements". A Panel Session on the NERC Alert was held on the Line Design WG. A NERC Alert TF was established and is charged with the development of a document entitled "Guidelines for Determining Conductor Temperatures During Measurement of Sag Along Overhead Transmission Lines".
- Joint TPC / ESMOL meeting was held on Wednesday
- A new WG for HVDC Line Design was formed at this meeting and will be chaired by John Chan of EPRI. A presentation and discussion to frame the scope of this WG was well received.
- Next meeting will be held jointly with ESMOL in February, 2012.

Reports by email to John McDaniel for inclusion.

9. Standards Activities

New IEEE-SA liaison for the T&D Committee is Laurie Policastro (email: L.Policastro@ieee.org Phone: 732-562-5493).

NEC rules – pool needs mesh for fault or stray current mitigation; now a loop is allowed even though EPRI testing shows it is not effective.

EMC standard on total harmonic distortion – current limits under and over 16 A. Trend data, coordination by joint membership and preparation of PQ WG paper for guidance.

Coordination, PAR on Power Line Noise Mitigation (Ed Hare, W1RFI@arrl.org, SDCOM Secretary)

Coordination, PAR 998 on Direct Lightning Stroke Protection of Substations – SA procedure August 16.

Coordination, PARs on UHV transmission systems including BSR/IEEE 1860-201X, Standard for Voltage and Reactive Power in 1000kV or Greater (Ultra High Voltage) AC Systems (Lisa Yacone, l.yacone@ieee.org). Ben Spherling (NTPA) – ask to consider where "Transmission" considerations, including for example high surge impedance loading, would logically fit – leadership etc.

Faulted circuit indicators – Switching and Overcurrent WG of Distribution Subcommittee / takeover by Insulated Conductors Committee – needs to be managed.

10. Technical Paper Reviews

Overlap threshold set a bit low – 8 to 11% - for example when an author expands on a WG paper that he/she also wrote or common introduction (only).

System detection of invalid emails could be improved.

11. Subcommittee Website Status

11.1 T&D Committee Website:

<http://grouper.ieee.org/groups/td/>

Maintained by Tom Grebe (tgrebe@ieee.org) / Revised: 5/24/2011.

11.2 Subcommittee Websites:

Administrative: <http://grouper.ieee.org/groups/td/admin/>

Maintained by Tom Grebe (tgrebe@ieee.org) / Revised: 5/24/2011.

Capacitor: <http://grouper.ieee.org/groups/td/cap/>

Maintained by Tom Grebe (tgrebe@ieee.org) / Revised: 5/20/2011.

DC & FACTS: <http://www.ece.uidaho.edu/hvdcfacts/>

Maintained by Brian Johnson (b.k.johnson@ieee.org) / Revised: 9/6/2009.

- Just updated to new template; provide new link to Tom.

Distribution: <http://grouper.ieee.org/groups/td/dist/>

Maintained by Dan Sabin (d.sabin@ieee.org) / Revised: 2/11/2011.

ESMOL: <http://www.ieee-esmol.org/>

Maintained by (centralia@msn.com) / Revised: 4/5/2011.

General Systems: <http://grouper.ieee.org/groups/td/gensys/>

Maintained by Brian Johnson (b.k.johnson@ieee.org) / Revised: 6/28/2010.

Integration of Renewable Energy into the Transmission and Distribution Grids:

<http://grouper.ieee.org/groups/td/renew/> Maintained by Michael Starke (mstarke@ieee.org) & Travis Smith (windman@ieee.org) , Revised: 1/14/2010.

Lightning and Insulator: www.ieee.org/pes-lightning or <http://ewh.ieee.org/soc/pes/lpdl/>

Maintained by Tom Short (t.short@ieee.org) / Revised: 1/31/2011.

www.ieee.org/pes-insulators or <http://ewh.ieee.org/soc/pes/iwg/>

Maintained by Andy Schwalm (aschwalm@victorinsulators.com) / Revised: 1/31/2011.

Power Quality: <http://grouper.ieee.org/groups/td/pq/>

Maintained by Tim Unruh (t.d.unruh@ieee.org) / Revised: 5/6/2011.

Towers, Poles and Conductors: http://www.geocities.com/ieee_tpc/index.htm

Maintained by Carol Douglass (math711@yahoo.com) / Revised: 9/8/2009.

This is the old web site. New one is ieee-tpc.org. Forward to Tom.

12. Future Meeting Schedule

- Jan 8-12, 2012 (Joint Technical Committee Meeting), Anaheim
 - Distribution Subcommittee, Power Quality and Capacitors will meet
- TBA Feb. 2012 (TPC/ESMOL/Insulators Committee Meeting), Tampa CIGRE TAG 6 (Craig Pon) invited;
- May 7-10, 2012 (IEEE PES T&D Conference and Exposition) in Orlando – panel sessions Lightning, Insulators, Distribution (several) and a possible DC contribution from TCP.

- July 22-27, 2012 (General Meeting) in San Diego – Panels: PQ alternative uses of power quality data (Wilsun Xu), Theories, experiences and practice with waveform distortion assessment (Gary Chang); Distribution several to be arranged. HVDC two panel sessions, life extension and HVDC associated with wind turbines (coordinate with Ernst Camm (renewables subcommittee) and Dick Piwko (WPCC)).
- July 21-25, 2013 (General Meeting) in Vancouver, B.C.