

**IEEE Distribution Subcommittee
Meeting Minutes
January 13, 2016
Memphis, TN**

ADMINISTRATIVE

Chair Julio Romero Aguero called the IEEE Distribution Subcommittee meeting to order at 1:30 p.m. with 10 members and 5 guests present. Introductions were the first order of business followed by approval of the 2015 General Meeting minutes. Two corrections were suggested and a motion to accept the amended minutes was made by Chuck DeNardo, Seconded by Dave Gilmer and the vote to approve was passed.

CHAIR REPORT – Julio Romero Aguero, *Distribution Subcommittee*

I have been serving as Editor of IEEE Transactions on Power Delivery (TPWRD), assisting the Editor-in-Chief, Prof. Wilsun Xu from University of Alberta, in the review of distribution related papers. I have been involving several of our distribution subcommittee members in these reviews, as well as other colleagues. I am Guest Editor-in-Chief of the following special issue:

- ❖ Protection and Real-Time Monitoring of Transmission and Distribution Systems with High Penetration of Distributed Generation and Microgrids

<http://www.ieee-pes.org/images/pdf/calls-for-transactions/Special%20Edition%20of%20IEEE%20Transactions%20PD-DER-Protection-SubmissionChange.pdf>

- ❖ Guest Editorial Board

- Walmir Freitas, University of Campinas (UNICAMP), Brazil
- Solveig Ward, Quanta Technology, USA
- Robert Uluski, UISOL, USA
- Fred Friend, American Electric Power (AEP), USA
- Bartosz Wojszczyk, Decision Point Global, USA
- Amin Khodaei, University of Denver
- Babak Enayati, National Grid

- ❖ Papers are currently being reviewed, objective is to finish review process during the first quarter of 2016.

I have been serving as Editor of IEEE Transactions on Smart Grid (TSG), assisting the Editor-in-Chief, Dr. Jianhui Wang from Argonne National Laboratory, in the review of papers pertaining to smart grid applications in distribution.

I am organizing an issue of IEEE Power and Energy Magazines on Business Aspects of Utility of the Future. Issue is expected to be published in July of 2016, seven articles are currently being prepared from authors from the US, Europe, Latin America and Asia.

I am also serving as Chair of the IEEE Working Group on Distributed Resources Integration, we are currently looking for volunteers for Vice Chair.

Shay Bharamirad has decided to step down as Vice Chair due to time limitations, since she has been given new responsibilities at ComEd. Therefore, we are looking for volunteers for Vice Chair. Key responsibility of Vice Chair is coordinate review of distribution papers for IEEE TPRWD. While a Vice Chair is appointed I will continue representing the Distribution Subcommittee as Editor of IEEE TPWRD.

VICE CHAIR REPORT – *None for this meeting*

WORKING GROUP REPORTS

DISTRIBUTION RELIABILITY –

Tuesday, January 12, 2016 2:00 PM to 4:30 PM MCCC Room L4

Val Werner, chair called the WG meeting to order with 27 attendees. Vice chair and secretary were present. The sign-in sheet was circulated.

Note: All presentations are available on the DRWG website <http://grouper.ieee.org/groups/td/dist/sd/>

Approval of July 28 & 29, 2015 Denver, CO WG Meeting Minutes

Introductions

Motion to accept: Larry Conrad, **Seconded:** John Lauletta.

Minor modifications to the agenda were undertaken to organize it to accommodate presenters' schedules.

Joe Eto – Lawrence Berkeley National Lab In the past Joe and others have presented, asked for input and modified a value of reliability cost estimation tool, called the ICE calculator, which is available

<http://www.icecalculator.com/>.

[Joe led a discussion which included background and direction for the calculator. The methodology dates back to work done in 1970s by the World Bank for investment in third world countries. Regulatory instigation may have led to the original value of service studies. Certain sectors may be naysayers of the approach.](#)

[Recently there has been focus on large scale long-term power interruptions as well as incorporation of local or standby generation. As far as the changes they saw, one might ask “Did the outputs of the ICE calculator change with the updated values?” Joe asserts they were not substantially affected. Changes were made which simplified the tool.](#)

[Joe and DOE are interested in hearing from the industry about the calculator, its value and how it practically has been applied. The use of the calculator continues to grow. Joe shared user stats which demonstrate that the web site's guests span a variety of industries.](#)

Cost/Funding TF – Joe Viglietta Co-chair

Joe provided background into the focus of the Cost and Funding Task Force, including

Information shared within the group (at previous web meetings) about approaches taken by companies. He also covered the scope document. There was discussion about what should be produced...a document, guide or some other material. There is a lot of fluidity on what the mission of this task force is. It was suggested that a panel session might be valuable. No one has yet been enlisted for such an activity. A panel could be assembled no sooner than 2017, at any rate, so discussion on the topic of panels needs to be reconsidered in July at the General Meeting. It was suggested by Larry Conrad that a webinar focused on the use of the ICE calculator, with Risk Assessment as an aspect of Reliability Assessment should be the guiding topic of that first call.

Volunteers were solicited who have a passion for this topic. John Lauletta volunteered to organize technical material from several folks on efforts that have been taken.

Presentation on Resilience Investigation, Performed by EPRI – Tom Short

A presentation was given, which is posted on the Working Group website. Various participants were part of a panel at the 2015 General Meeting in Denver, and their presentations were posted on the Working Group website also. (I have them to send to Dan Sabin when we post presentations and minutes.) Tom discussed that there were very similar results in terms of major event versus non-major event days. The fundamental conclusion was that what you do to build big-event resilience builds small-event resilience. Attendees concurred generally they had seen the same results, anecdotally speaking. They found that one of the challenges of comparing performance was trying to get to a decent level of granularity, such as conductor type and cover type (covered or not), construction type, age, etc. Ideally you would know all of these parameters. EPRI work was just published and the lab testing is finished. Videos of the destruction testing were shared.

The presentation lasted until the end of the WG meeting time allotment.

Wednesday, January 13, 2016 8 am to 12 pm, Dist. Reliability WG Part 2, Room: MCCC L4

Val Werner, chair called the WG meeting to order with 27 attendees. Vice chair and secretary were present. The sign-in sheet was circulated to new attendees to Part 2.

Minor modifications to the agenda were undertaken to organize it to accommodate presenters' schedules and align with technical issues for remote participation.

Data Analysis & Benchmarking Task Force – Heide Caswell Chair

Joe Eto reviewed further analysis performed on IEEE DRWG Benchmark datasets (for those companies that allow their data to be included in such study activity). The presentation is available at the website. Within the study it is fairly clear that the transmission impacts to reliability are substantially less than the distribution impacts. This is even more noteworthy since the voltage included in transmission includes non-BES elements, going down to 34.5 kV. This is new and useful information to the industry. This work is memorialized in a paper jointly written by Joe Eto, Kristina Hamachi LaCommare and Heide Caswell. If possible, inclusion of perspective from someone from NERC would be helpful. Paper is in draft stage at this time.

Heide Caswell reviewed the schedule for the 2016 DRWG Benchmark. The group agreed that the due date would be March 15, 2016 for final submittal of data. A final reminder email will go out on March 8, 2016 to get last entries into the pipeline. Last year involved multiple runs for processing results and became unnecessarily burdensome. As a result, this will not be repeated. At the General Meeting the basic comparisons will be provided and the Working Group concurred that it would provide guidance to the Data Analysis Task Force about avenues of analysis to be performed.

Several lines of inquiry are intended to be pursued separately from the Wizard (probably using SurveyMonkey or some such application), including planned outage scenarios, major event segmentation and transmission voltage/function dividing lines.

Alvin Razon attended remotely to present material about PwrMetrix, the global benchmarking application developed by Aerinet. There was a detailed discussion about the tool. Attendees had some good questions about how the data would be managed and whether there was risk of loss of anonymity with the application. There's still a fair amount of legal consideration which needs to be undertaken before moving forward with this being the primary method for the IEEE DRWG benchmark. Those with concerns about this approach are requested to email the DRWG leadership team.

Anyone interested in joining the Data Analysis TF can contact Heide: Heide.Caswell@pacificorp.com

1366 Task Force – John McDaniel Chair

No discussion was engaged in for 1366.

1782 Task Force – Val Werner Chair

No suggestions or volunteers to add to or change the 1782 guide.

Predictive Reliability TF – Le Xu Chair

Due to scheduling issues, a report out from the Predictive Reliability Task Force was unable to be performed.

Tools TF – Tyler Jones Chair

Limited involvement has been experienced in the Tools Task Force. Tyler Jones would gladly welcome attendance and participation by newly interested folks. Please email him at Tyler.Jones@pacificorp.com.

Other Business

Concern was raised about the EIA annual data collection survey form. In the form there were details requested about distribution automation. It appeared that the DRWG could help them improve the quality of the questions. Joe Eto offered to connect the DRWG with EIA and get this resolved.

Regulatory Update

No regulatory update was completed.

For any regulatory information, individuals were asked to email the material to Working Group Secretary, Heide Caswell heide.caswell@pacificorp.com

Materials received...

Heide Caswell: Oregon has regulatory matters underway in two areas. One is related to Customer Generation/NetMetering & SmartGrid. They have developed a three pronged approach to addressing costs, system impacts and rate structures to ensure that these considerations do not become barriers to deployment. Also the state regulators are continuing to review NESC requirements in regards to service clearances with a view toward developing a state-wide strategy for handling legacy situations. holding workshops about legacy service clearance requirements. In California, the legislatively mandated requirement for a Distribution Resource Plan which includes customer generation initiated a large effort that involved smaller IOUs. In the meantime, the proceeding has been split such that small operators (which PacifiCorp is one in California) are separately addressed from the large state IOUs. Also in California work continues with its Fire Safety Phase 3 rulemaking. The state is developing a state-wide map that is to designate areas where higher fire threats might exist, which is planned to be available later this year. In Wyoming rulemaking was concluded which consolidated the number of statutes; in general the changes that were made appear to clarify certain of the company's obligations. In Washington, Idaho and Utah, no major changes underway.

DRWG Presentations Wanted

Anyone interested in making a presentation (limit 30 minutes or less) should send the Title, Presenter, Duration, and 1-3 line description to v.werner@ieee.org *at least two months* before the meeting at which you want to present.

Next meeting is scheduled for July xx-xx, 2016 in Boston, MA.

Topics suggested include: 1) the cost to remove a tree, 2) avoided cost business case and 3) cable replacement business case.

A motion to adjourn the WG meeting for Wednesday was made by Larry Clark and seconded by Larry Conrad. The Working Group adjourned just prior to Noon.

SWITCHING AND OVERCURRENT PROTECTION – Fred Friend, Chair

Meeting had 15 participants.

- ❖ The meeting began with introductions, a safety topic related to safe driving, and review/approval of minutes from the General Meeting in July, 2015.
- ❖ Officer Elections – Dave Gilmer led the elections process. After an open period for nominations and discussion, officers were re-elected to current positions.
- ❖ IEEE Policy for Working Group Meetings was reviewed.
- ❖ Most of the meeting was dedicated to discussion of latest draft of P1806 Guide for Reliability Based Placement of Overhead and Underground Switching and Overcurrent Protection Equipment Up to and Including 38 kV
 - Reviewed document comments Draft 3.1
 - Reviewed content for additional sections
 - Made new writing assignments
 - Add or revise sections:
 - 4.5 Factors affecting selection and application of protection and switching devices Heidi Caswell and Rodney Robinson
 - 5 Reliability Improvement Heidi Caswell and Rodney Robinson
 - 6 Protection Zones Dave Gilmer
 - 9.3 Failure to reach the point of diminished returns Dave Lankutis
 - 9.4 Estimated Costs to save Customer Interruptions Dave Lankutis
 - 16 Business Cases Heidi Caswell
 - 18 The effect of fault causes and fault rates
 - Due by April 30, 2016
 - Finalize draft at summer meeting
 - The chair will arrange a web meeting for review of progress before the summer meeting. The review will proceed from Section 9.6, “Choosing candidate locations for devices on radial circuits.”
- ❖ New Business
 - After a brief discussion of potential future panel sessions, members were invited to send ideas for panel topics to Fred Friend.

❖ The meeting started and adjourned on time.

SMART DISTRIBUTION – Larry Clark, Chair

Larry Clark called the meeting to order at 8:00 am on January 11, 2016 in room MCCC-L4 and welcomed the Group that included 34 representatives of utilities, vendors, and academic institutes. The SDWG leadership, Larry Clark-Chair, Bob Uluski-Vice Chair and Fred Friend-Secretary, were introduced. John Sell, Elections Processor, nominated the current SDWG leadership, called for nominations from the floor. There being no nominations from the floor, John facilitated a voice vote confirming the SDWG leadership. Larry reviewed the IEEE policies on patents, copyrights, etc. The minutes of the last meeting (Denver, CO, July 2015) were discussed including online availability and were subsequently approved unanimously.

Larry reported that Anil Pahwa, chair of the DMS DA Award selection committee, is accepting nominations for the 2016 award. The Nomination deadline for the 2016 award is extended to January 31, 2016. Nomination and the supporting letters should be submitted to Anil Pahwa by the nominator by the deadline through email (Pahwa@ksu.edu) with the subject of the email message being "2016 IEEE PES Douglas M. Staszsky Distribution Automation Award - Nomination".

The ‘*Smart Distribution Systems*’ tutorial (Full day, 8-hour course) will be performed on Thursday, July 21, 2016 at the GM in Boston, MA.

The Smart Distribution Working group is sponsoring 3 invited panel sessions with 1 at the 2016 T&D in Dallas, TX and 2 at the 2016 GM in Boston, MA. At the 2016 T&D, the panel topic is ‘*DMS Integration with DERMS & Microgrid Controllers*’, Chair Bob Uluski. At the 2016 GM, the panel topics are Session 1 ‘*Protection design for Micro Grids*’, Chair: Georges Simard and Nouredine Hadjsaid and Session 2 ‘*Distribution planning under uncertainties*’, Chair: Georges Simard and Nouredine Hadjsaid [Session 2 was submitted to SDWG and may be aligned with Power System Planning & Operations working group invited panel sessions].

Larry Clark reviewed the requirements for the development of an invited panel proposal. For the IEEE PES 2017 GM, invited panel proposals need to be submitted during 4th quarter 2015. The proposal is to include the title, description (150 words maximum) and the moderator with the list of 4 panelists for the invited panel proposal.

Larry facilitated a roundtable discussion of Smart Distribution member project reports. The roundtable participants were asked to submit a brief summary of their contribution to SDWG secretary.

The next SDWG meeting is at 2016 IEEE PES GM in Boston, MA on July 17-21, 2016.

The meeting was adjourned at 10:00 am.

DMS TASK FORCE (DMSTF) – Bob Uluski, Chair

The DMS TF did not hold a meeting this time.

VOLT/VAR (VVTF) TASK FORCE – Larry Conrad, Chair

The Volt Var Task force met on January 12, 2016 from 10:00 to 12:00 noon in Room 14.

Twenty-three people attended the meeting. The required patent and price fixing slides were presented as required.

Murty Yalla reported on the results for the Volt Var tutorial from the 2015 general Meeting. The ten on-site registrations caused some problems because all room and booklet plans were made for no more than 30 participants. Having 37 participants made life difficult. Reviews for the content were good with participants wanting a slightly slower pace for the presentations.

Bob Uluski reviewed progress on P1885 and solicited additional input. Seven people specifically volunteered to help. In preparation for voting, the participation list will be reviewed. Notification of voting status will be sent along with the process for re-instatement and opportunities to participate. The objective is to have a high quality draft approved for submission to the standards process by the 2016 General Meeting.

Larry Conrad led a discussion about measurement and verification in the presence of distributed generation – especially photovoltaic. This appears to be an emerging issue.

WORKING GROUP ON DISTRIBUTED RESOURCES INTEGRATION – Tom McDermott, Chair

1. Call to Order/Review Agenda

Julio Romero Aguero (Vice Chair) chaired the session. The agenda was reviewed and approved. Julio briefly introduced the “Participants, patents, and duty to inform” and other guidelines for IEEE WG meetings, reviewed the agenda, and received agreement to proceed per the agenda.

2. Introduction of Attendees

23 attendees

3. Discussion on appointment of new Chair of DRI WG

Julio committed to take the role of Chair for one year and manage the transition to a permanent Chair. In the meantime, the WG membership will be actively looking for a permanent replacement. Bob Arritt will continue in his role of Secretary of the WG and the position of Vice Chair will be vacant until candidates are identified.

4. Minutes of July 2015 meeting in Denver

The minutes of the last session were reviewed and approved. Julio committed on behalf of the WG board on providing the minutes and the agenda with enough anticipation for attendees to review them and suggest changes. Meeting minutes and agendas will be posted

5. Update on IEEE P2030.7 Standard for Specification of Microgrid Controllers - WG on Distributed Resources Integration – Prof. Geza Joos (McGill University)

Shay Bahramirad provided a status to the group.

6. Presentation by Dr. Aleksi Paaso. “Geographic Information System (GIS) Based Evaluation of a Utility Service Territory for Public Purpose Microgrid Installations”

Much discussion on O&M cost and ownership. Presented the screening criteria and load composition i.e. hospital, Rockford Airport, etc. Larry Clark discussed the reliability of O'Hara to Rockport Airport and load growth. The composition of generation was discussed.

7. Presentation of Distribution System Operator (DSO) by Dr. Dimitra Apostolopoulou and discussion about proposal for Distribution System Operator Task Force

Discussed merits of the task force. John McDaniel took the action to get feedback from IEEE leadership, he mentioned that there is a chance that this will become a join Task Force with the newly created Planning and Operations committee.

8. Discuss 1547

Looking for someone to serve as a liaison, several have been identified, but still needs to be finalized

9. Discussed panel sessions scheduled for 2016 and next meeting at IEEE PES GM (July 17-21, 2016 Boston, MA)
 - a. 2016 T&D Conference and Exposition
 - b. 2016 PES General Meeting

Discussed upcoming activities and the time of next meeting and potential format.

10. Adjourn

STRAY AND CONTACT VOLTAGE WORKING GROUP – Chuck DeNardo, Chair

The Stray and Contact Voltage Working Group met at the 2016 IEEE PES Joint Technical Committee Meeting on the afternoon of Monday January 11th at the Memphis Cook Convention Center in Memphis, TN. There were approximately 30 people in attendance. Following review and approval of the Denver meeting minutes, the chair announced his replacement as **Matt Norwalk** who would be taking over at the General Meeting.

The status of the ballot recirculation was then discussed. Draft 3 of the guide received a 91% affirmative vote and has been submitted to REVCOM. The chair discussed the requirement to recirculate the document following any changes. One comment received was the incorrect placement of a citation that would be considered a technical change if implemented. Erin Spiewak was present and provided guidance on the way to resolve the issue. The group agreed the citation was not important to the guide and could be removed by the SA editorial staff. All other comments received during circulation were editorial and were rejected to allow SA editorial staff to make the necessary changes.

The group discussed future improvements to the guide including review and incorporation of rejected comments received during balloting. The group discussed the need to incorporate case studies into the guide and determined that a standard format would need to be developed.

Dave Kalokitis and Stu Hanebuth provided presentations from the 2015 Jodie Lane Conference that will be posted on the website.

The final topic of discussion was the need to reaffirm or nominate new officers. The group's policies and procedures would be reviewed and circulated prior to the summer meeting where a vote will take place.

The meeting was adjourned.

LIAISON REPORTS

Insulated Conductors

No report is available

Power System Communications

No report is available.

Power Systems Instrumentation and Measurement (PSIM)

No report is available.

C84 – Larry Conrad

C84.1 is in the revision cycle again. Very few changes are expected. There have been some discussions about clarifying voltage levels in consideration of Conservation Voltage Reduction. A possible outcome might be a statement that Range A is recommended for all continuous energy saving strategies and for frequent demand reduction strategies. Range B could be used for occasional demand reduction. It is too soon to tell if this will happen. Members of the Distribution Subcommittee should contact Larry Conrad, l.conrad@ieee.org for comments or questions.

Power System Relaying Committee – Fred Friend

The next meeting will be at the Hyatt Regency, Denver, CO, 9 – 12 May 2016.

Subcommittees of the PSRC are Systems Protection, Line Protection, Relaying Communications, Relaying Practices, Rotating Machinery and Substation Protection.

Meeting minutes can be viewed from the following link: <http://www.pes-psrc.org/Aminutes.html>
The following items may be of special interest to the Distribution Subcommittee members of the T&D Committee.

Working Group C2, chaired by Alex Apostolov, is nearing completion of a report to the PSRC to identify the functions and data available in Protective Relaying Devices used at different functional levels and different applications within a Smart Grid.

Working Group C25, chaired by Martin Best, is preparing a report on the Protection of Wind Electric Plants to provide guidance on relay protection and coordination at wind electric plants, covering protection of generator step up transformers, collector system feeders, grounding transformers, collector buses, reactors, capacitors, main station transformers, tie lines and points of interconnection and associated arc flash issues.

A new Working Group C30, chaired by Michael Higginson, was formed to prepare a report that will investigate and assess techniques, approaches, and potential solutions to the challenges of microgrid protection.

Working Group D28, chaired by Brian Boysen, is revising and updating C37.230 – Guide for Protective Relay Applications to Distribution Lines.

Working Group I22, chaired by Bob Beresh, completed a report to the PSRC titled “End of Life Assessment for P&C Devices for determining the end of useful life for protection, control, and monitoring devices.

Link to completed PSRC reports http://www.pes-psrc.org/Reports/APublications_new_format.htm

Transformers Committee – Fred Friend

Subcommittees of interest may be Distribution Transformers, Insulating Fluids, Insulation Life, Instrument Transformers, Performance Characteristics, Standards, and Underground Transformers and Network Protectors.

The following is a link to their homepage: <http://www.transformerscommittee.org/>

I. Standards approved since April 1, 2015

NEW Transformer Standards Approved

C57.163 - Guide for Establishing Power Transformer Capability while under Geomagnetic Disturbances

C57.130 - Guide for the Use of Dissolved Gas Analysis Applied to Factory Temperature Rise Tests for the Evaluation of Mineral Oil-Immersed Transformers and Reactors

C57.157 - Guide for Conducting Functional Life Tests on Switch Contacts Used in Insulating Liquid

Transformers

NEW Amendments Approved

1538a - Guide for Determination of Max Winding Temp Rise in Liquid Transformers - Amendment#1

REVISIONS to Transformer Standards approved

C57.12.34 Standard for Requirements for Pad-Mounted, Compartmental Type, Self-Cooled, Three Phase Distribution Transformers, 10 MVA and Smaller;

C57.12.37 Standard for the Electronic Reporting of Distribution Transformer Test Data

C57.12.59 Guide for Dry-Type Transformer Through-Fault Current Duration

C57.125 Guide for Failure Investigation, Documentation, Analysis, and Reporting for Power Transformers and Shunt Reactors

C57.637 Guide for the Reclamation of Mineral Insulating Oil and Criteria for Its Use
Fall 2015 Standards Report Page 2 of 23

Transformer Standards that are on the December Standards Board Revcom Agenda

PC57.12.00 General Requirements for Liquid-Immersed Distribution, Power, & Regulating Transformers

PC57.12.90 Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers

PC57.139 Guide for Dissolved Gas Analysis in Transformer Load Tap Changers

PC57.106 Guide for Acceptance and Maintenance of Insulating Oil in Equipment
PC57.32 Standard Requirements, Terminology, and Test Procedures for Neutral Grounding Devices

II. PARs approved since April 1, 2015

PAR for Corrigenda

PC57.12.70-2011 Standard Terminal Markings and Connections for Distribution and Power Transformers - Corrigendum 1: Correction of Annex Figures (expires 12/31/2019)

PARs for Revisions The following were approved in 2015, and will Expire Dec 31st 2019

PC57.12.32 Standard for Submersible Equipment – Enclosure Integrity

PC57.12.60 Standard Test Procedure for Thermal Evaluation of Insulation Systems for Dry-Type

Power and Distribution Transformers

PC57.12.58 Guide for Conducting a Transient Voltage Analysis of a Dry-Type Transformer Coil

PAR Modifications approved none

PAR Extensions approved

PC57.140 Guide for Evaluation and Reconditioning of Liquid Immersed Power Transformers (extended until Dec 2017)

PC57.138 Recommended Practice for Routine Impulse Test for Distribution Transformers (extended until Dec 2016)

The following PAR for a Revision was deferred until December 2015

PC57.12.38 Standard for Pad-Mounted-Type, Self-Cooled, Single-Phase Distribution Transformers

The following Requests for PAR Extension are now on the December 2015 Agenda:

PC57.156 Guide for Tank Rupture Mitigation of Liquid-Immersed Power Transformers and Reactors

PC57.12.24 Standard for Submersible, Three-Phase Transformers, 3750 kVA and Smaller: High Voltage, 34 500

GrdY/19 920 Volts and Below; Low Voltage, 600 Volts and Below

PC57.19.04 Standard Performance Characteristics and Dimensions for High Current Power Transformer

Bushings with Rated Continuous Current in Excess of 5000 A in Bus Enclosures

PC57.12.36 Standard Requirements for Liquid-Immersed Distribution Substation Transformers

IV. Transformers Committee Ballot Status (as of Oct 30, 2015)

Subcommittee PAR or Standard Status # of Balloters Ballot Close

Dielectric PC57.138 Ballot Invitation 95

Dist PC57.12.31-2010 Cor_1 Comment Resolution 76 2/7/14

Dist PC57.12.34 Comment Resolution 1 106 6/7/15

Dist PC57.12.36 Comment Resolution 142 11/5/14

DryType PC57.12.59 Comment Resolution 1 89 7/16/15

DryType PC57.94 Comment Resolution 1 93 9/20/15

InsFluid PC57.106 Recirculation 3 121 10/16/15

InsLife PC57.119 Comment Resolution 3/18/15

Instrument PC57.13 Recirculation 4 135 10/19/15

PerfCharac PC57.159 Comment Resolution 129 6/25/15

PerfCharac PC57.32 Comment Resolution 2 138 10/12/15

PwrTrans P60076-57-1202 Comment Resolution 1 75 6/28/15

PwrTrans PC57.156 Comment Resolution 1 118 10/1/15

PerfCharac P60076-16 Comment Resolution 151 2/27/15

Stds PC57.12.90 Recirculation 3 240 10/26/15

Std. PC57.12.00 Recirculation 3 243 10/15/15

UG PC57.12.24 PreBallot 76

SCC 21 – Bob Saint

No report is available.

STANDARDS

NESC – Rusty Soderberg

I was unable to attend the 2016 PES meeting in Memphis. The latest NESC information follows:

An NESC White Paper has been released describing the outcomes of the NESC Visioning Sessions that took place at the NESC Summit in April 2015. See link below to access the White Paper. The NESC Executive Subcommittee is planning another NESC event in October 2016 that will focus on changes in the NESC 2017 edition, as well as efforts to further the topics identified at the Visioning Sessions.

[Download a copy of The White Paper here »](#)

The NESC Code was used in producing an electrical code in Pakistan. The NESC now has global impact, providing positive benefit outside the U.S. See link below for article.

<http://standards.ieee.org/news/2015/petsac.html>

All of the NESC subcommittees met in August, September, and October of 2015 to provide our final votes on the 2017 NESC. This was the second vote in the 2017 Code cycle, the purpose of this second voting meeting is to provide members the opportunity to change their votes based on the public comments received. There were 751 total change proposals and 746 comments on those change proposals that had to be reviewed. The majority of the change proposals and comments were in the clearance section and in the strength and loading section. The 2017 NESC is now being finalized and will be available August 1, 2016.

As a follow-up to my discussions at the distribution subcommittee meeting in Denver, below are some key change proposals and their voting results.

CP 4701 was written to provide simplicity and clarity in Rules 215 C2-C8 regarding guy wire grounding and insulation. Discussions revolved around the possibilities of guys breaking/sagging into energized conductors. There were 14 comments on this CP and the CP was accepted as modified.

CP 4683 is a proposed change to use the resulting sags from Rule 250D, “Extreme ice with concurrent wind loading” for clearances over roadways etc. in addition to using the district map. This would have required the use of taller poles for utilities. There were 3 comments on this CP and the CP was rejected based on the results of an NESC working group.

CP 4694 is a proposal to add strength factors to insulators. There were 15 comments on this CP and the CP was accepted as modified.

CP 4506 would change the safety factors in the strength and loading section of the Code if using non-linear analysis methods. There were 19 comments on this CP and the CP was rejected based on public comment received.

CP 4700 During the Subcommittee 5 meeting in September 2013 a proposal was made to make Grade B construction applicable not only when crossing a limited access highway, railroad, or navigable waterway, but also applicable to any lines running along these areas (if the line could fall into them). There were 17 comments on this CP and it was rejected since the proposed definition was an unnecessary expansion of the original rules intent.

CP's 4602 4603 4606 4609 are change proposal to remove Grade N from the Code. There were 15 comments on the CP's and Grade N will remain in the Code.

CP 4651 is a change proposal to eliminate the k factor (the constant listed in Table 251-1) in the Code. This may affect companies sag and tension tables (more work for the utilities) with no increase in safety. In the August NESC meeting I gave a short presentation with calculations showing what the impact would be on sags and tensions, this helped with the rejection of the CP.

CP 4641 is replacing the extreme ice maps. New ice maps were accepted during the August voting meeting which may negatively impact some northern states and perhaps other states in the nation as well. In one example the wind increased from 40 mph to 50 mph, which may mean an increase in pole size for some northern states.

CP 4610 is regarding the modification/removal of the 60' exemption. The 60' exemption allows most distribution poles to be exempt from certain analyses. There were 30 comments received on this CP, all but one of the comments opposed modifying/removing the 60' exemption. Because of public comment this change proposal was rejected.

As can be seen above, public comment does weigh into NESC voting decisions, so please continue to be a part of the process.

PANEL SESSIONS

Panel sessions for future meetings:

SMART Distribution WG three proposals for 2017

Stray Voltage... WG will have a paper or panel

S&O/DRI WGs will have a joint paper or panel in 2017

Papers are due in November for 2017 General Meeting

PRESENTATIONS

No presentation was made at this meeting

Presentations from previous meetings are posted at the Distribution Subcommittee website:

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

NEW BUSINESS

Only one panel session allowed at General Meeting for each Subcommittee. Only way to get a projector at the General Meeting is to have a combo meeting with an accepted paper. Otherwise, bring your own projector. When requesting room, ask for screen, projector table and power strip. – John McDaniel

PAR Number	Title	Working Group	Chair
P1695	Draft Guide to Understanding, Diagnosing and Mitigating Stray and Contact Voltage	Stray and Contact Voltage WG	Charles DeNardo
P1782	Guide for Collecting, Categorizing and Utilization of Information Related to Electric Power Distribution Interruption Events	Distribution Reliability WG	Val Werner
P1854	Guide for Smart Distribution Applications	Smart Distribution WG	Larry Clark
P1885	Guide for Assessing, Measuring and Verifying Volt-Var Control Optimization on Distribution Systems	Smart Distribution WG	Larry Clark
P1806	Guide for Reliability Based Placement of Overhead and Underground Switching and Overcurrent Protection Equipment	Switching and Overcurrent Protection WG	Fred Friend

Appendix: Current Membership Roster

Chair: Julio Romero Aguero, Raleigh, NC
 Vice Chair: vacant
 Secretary: Val Werner, WI

Bouford, J., Augusta, ME
 Caswell, H., Portland, OR
 Clark, L., Birmingham, AL
 Cole, J., Bozeman, MT
 Conrad, L., Plainfield, IN
 DeNardo, C., Milwaukee, WI
 Friend, F., Columbus, OH
 Gilmer, D., Kerrville, TX
 Hayes, H., St Louis, MO
 Jones, T., Portland, OR
 Lambert, F., Forest Park, GA
 McDaniel, J., North Syracuse, NY
 Miller, L., Kennewick, WA

Norwalk, M., Fullerton, CA
 Robinson, R., Topeka, KS
 Romero Aguero, J., Raleigh, NC
 Sabin, D., Beverly, MA
 Saint, B., Granby, CO
 Smith, J., Phoenix, AZ
 Soderberg, R., Jackson, MI
 Venkata, M., Redmond, WA
 Viglietta, J., Philadelphia, PA
 Ward, D., Richmond, VA
 Werner, V., Milwaukee, WI
 Xu, L., Raleigh, NC