Members DTSC S25 (156 members)

First Name	Last Name
Kayland	Adams
Alex	Alahmed
Tauhid Haque	Ansari
Stephen	Antosz
Elise	Arnold
Javier	Arteaga
Onome	Avanoma
Donald	Ayers
Christopher	Baumgartner
Jason	Beaudoin
Enrique	Betancourt
Daniel	Blaydon
William	Boettger
Dominique	Bolliger
Jeffrey	Britton
David	Calitz
Juan Alfredo	Carrizales
Camilo	Casallas

First Name	Last Name
Juan	Castellanos
Craig	Colopy
Juan Carlos	Cruz Valdes
Roberto	Da Silva
Eric	Davis
Everton	De Oliveira
Sami	Debass
Gabriel	Delgado
Scott	Dennis
Huan	Dinh
Jeffrey	Door
Samragni	Dutta Roy
Evgenii	Ermakov
Marco	Espindola
Reto	Fausch
Hugo	Flores
Bruce	Forsyth
Raymond	Frazier

First Name	Last Name
Richard	Frye
Miguel	Garcia
Eduardo	Garcia Wild
Rob	Ghosh
Alireza	Gorzin
Shawn	Gossett
Bill	Griesacker
Detlev	Gross
Ravi	Gupta
John	Harley
Roger	Hayes
Ronald	Hernandez
Jean Carlos	Hernandez
Sergio	Hernandez Cano
John	Herron
Thang	Hochanh
Saramma	Hoffman
Philip	Hopkinson

IEEE PES Power & Energy Society

IEEE PES 100 YEARS 2018 TRANSFORMERS COMMITTEE

Members DTSC S25 (156 members)

First Name	Last Name
Saif	Hossain
John	John
Akash	Joshi
Kurt	Kaineder
Jerzy	Kazmierczak
Sheldon	Kennedy
Stacey	Kessler
Yeounsoo	Kim
Zan	Kiparizoski
Egon	Kirchenmayer
Evan	Knapp
Fernando	Lagos
David	Larochelle
Fernando	Leal
Moonhee	Lee
Aleksandr	Levin
Weijun	Li
Mario	Locarno

First Name	Last Name
Luc	Loiselle
Xose	Lopez-Fernandez
José Luis	Machain
Tim-Felix	Mai
Brian	McBride
James	McBride
Thomas	Melle
Kent	Miller
Francis	Mills
Juliano	Montanha
Emilio	Morales-Cruz
Marta	Muñoz
David	Murray
Ali	Naderian
Aniruddha	Narawane
Parminder	Panesar
Dwight	Parkinson
Poorvi	Patel

First Name	Last Name
Rakesh	Patel
Harry	Pepe
Sylvain	Plante
Klaus	Pointner
Bertrand	Poulin
Thomas	Prevost
Jarrod	Prince
Khan	Qasim
Ulf	Radbrandt
Ion	Radu
Timothy	Raymond
Scott	Reed
Diego	Robalino
Zoltan	Roman
Rodrigo	Ronchi
Mickel	Saad
Hakan	Sahin
Dinesh	Sankarakurup

Members DTSC S25 (156 members)

First Name	Last Name
Amitabh	Sarkar
Daniel	Sauer
Alan	Sbravati
Markus	Schiessl
Eric	Schleismann
Ewald	Schweiger
Cihangir	Sen
Abdulmajid	Shaikh
Hemchandra	Shertukde
Jonathan	Sinclair
Kushal	Singh
Christopher	Slattery
Steven	Snyder
Sanjib	Som
Mike	Spurlock
Fabian	Stacy

First Name	Last Name
Brad	Staley
Kyle	Stechschulte
Andrew	Steineman
Charles	Sweetser
Janusz	Szczechowski
Matthew	Sze
Jonathan	Tan
Troy	Tanaka
Vijay	Tendulkar
Scott	Thomas
Alwyn	Van Der Walt
Ajith	Varghese
Jason	Varnell
Rogerio	Verdolin
Krishnamurthy	Vijayan
Dharam	Vir

First Name	Last Name
Pragnesh	Vyas
Mike	Waldrop
David	Wallace
David	Wallach
Eric	Weatherbee
Bruce	Webb
Matthew	Weisensee
Drew	Welton
Peter	Werelius
Daniel	Weyer
Joe	White
Barrett	Wimberly
Terry	Wong
Fei	Yang
Kris	Zibert
Waldemar	Ziomek

QR Code S25 Attendance

Dielectric Test Subcommittee (DiTest SC)

March 26th ,2025

Spring 2025, Denver, CO

Chair- Poorvi Patel

Vice Chair-Thang Hochanh

Secretary – Diego Robalino

AGENDA – DTSC (Page1 of 2)

A. Welcome

B. Call for patents and Copyright policies

C. Chairman's Remarks

D. Membership Status

E. Attendance & Quorum

F. Approval of Meeting Agenda

G. Approval of Fall 2024 St. Louis MO meeting

H. Old/Unfinished Business

I. New Business

AGENDA – DTSC (Page2 of 2)

G. Working Group/ Task Force Reports

• TF - Core Ground & Winding Insulation Resistance	D. Robalino
• TF Revision to Low Frequency Tests	A. Varghese
• TF PD Testing of DTR, Wind & Solar Transformer	
• TF Revision to Impulse Test	S. Plante
• TF Clearance between bushings (Virtual)	T. Ansari
• WG Guide for DFR Test (C57.161)	E. Ermakov
• WG Detection of Acoustic Emissions from PD (C57.127)	D. Gross
• WG C57.138- Recommended Practice for Routine Impulse Tests	H. Sahin
• TF for DFR on Instrumental Transformers	I. Guner
• Liaison Report - HVTT	J. McBride
• TF Transient failure mitigation (WG PC57.142)	J. McBride

H. Adjournment

Today's Sign-in Sheet

Role	First Name	Last Name	Email	New E-mail	3/26/2025	Req. Memb.	Agree e-mail contact
Guest	Mubarak	Abbas	mubarak.abbas@siemens-energy.com				
Guest	Isaac	Abdalla	iabdalla@hicoamerica.com				
Guest	Juan	Acosta	juan.acosta@ergon.com				
Member	Kayland	Adams	kayland.adams@prolec.energy				
Guest	Raj	Ahuja	rajahuja2@gmail.com				
Member	Alex	Alahmed	alahmed.alex@gmail.com				
Guest	Daniel	Aleksandrovich	daniel.aleksandrovich@hitachienergy.com				
Guest	Robert	Allison	robert.l.allison@dominionenergy.com				
Guest	Mihir	Amin	mihirnamin@eaton.com				
Guest	Gregory	Anderson	gwanderson@ieee.org				
Member	Tauhid Haque	Ansari	tauhid.ansari@hitachienergy.com				
Member	Stephen	Antosz	santosz@ieee.org				
Guest	Edmundo	Arevalo	erarevalo@bpa.gov				
Member	Elise	Arnold	elise.arnold@sgb-smit.group				

IEEE PES Power & Energy Society®

IEEE PES 1918 2018 100 YEARS TRANSFORMERS COMMITTEE

Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents

- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

Early identification of holders of potential Essential Patent Claims is encouraged

Ways to inform IEEE

- **Cause an LOA to be submitted to the IEEE SA (patcom@ieee.org); or**
- **Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or**
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- ***IEEE SA Standards Board Bylaws***
  (http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6)
- ***IEEE SA Standards Board Operations Manual***
  (http://standards.ieee.org/develop/policies/opman/sect6.html#6.3)

Material about the patent policy is available at *http://standards.ieee.org/about/sasb/patcom/materials.html*

If you have questions, contact the IEEE SA Standards Board Patent Committee Administrator at patcom@ieee.org

IEEE SA Copyright Policy

- **By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.**

    - Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.

- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.

    - For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.

IEEE SA Copyright Policy

- The **IEEE SA Copyright Policy** is described in the *IEEE SA Standards Board Bylaws* and *IEEE SA Standards Board Operations Manual*

- IEEE SA Copyright Policy, see
  Clause 7 of the *IEEE SA Standards Board Bylaws*
  https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7
  Clause 6.1 of the *IEEE SA Standards Board Operations Manual*
  https://standards.ieee.org/about/policies/opman/sect6.html

- IEEE SA Copyright Permission

- https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/permissionltrs.zip

- IEEE SA Copyright FAQs

- http://standards.ieee.org/faqs/copyrights.html/

- IEEE SA Best Practices for IEEE Standards Development

- http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf

- Distribution of Draft Standards (see 6.1.3 of the *IEEE SA Standards Board Operations Manual*)

- https://standards.ieee.org/about/policies/opman/sect6.html

Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - IEEE Code of Ethics
  - IEEE Code of Conduct
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at http://www.ieee.org/about/corporate/governance

Participants in the IEEE-SA "individual process" shall act independently of others, including employers

- The IEEE-SA Standards Board Bylaws require that "*participants in the IEEE standards development individual process shall act based on their qualifications and experience*"
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the "*individual process*", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The IEEE-SA Standards Board Bylaws (clause 5.2.1.3) specifies that "*the standards development process shall not be dominated by any single interest category, individual, or organization*"
  - This means no participant may exercise "*authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints*" or "*to hinder the progress of the standards development activity*"
- This rule applies equally to those participating in a standards development project and to that project's leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project's IEEE-SA Program Manager

Chairman's Remarks

- Members or Guests who speak at the meeting – Name and Affiliation
- Please don't take pictures during the WG/TF meetings of the slides
- Motions/New Agenda during SC
  - Recommend submitting in writing to before the SC meeting
- **Future Transformer Committee & DiTest SC Meetings**

IEEE General Meeting	July 27-31, Austin, TX
Fall 2025:	Oct. 19-23, Bonita Springs, FL
Spring 2026:	March 22-26, Fort Worth, TX
IEEE T&D	May 4-7, Chicago, IL

Chairman's Remarks

WG/TF ACTIVITIES

- WG's **should** specify standards on performance and function and **NOT** on design, construction or specification
  - No Commercial activities or discussions – Cost, T&C, patent claims, etc.
  - Focus on Technical considerations
  - Diversity in important
- Keep the PAR Deadline in mind- Extensions to be minimized
- As Member at the SC- it is your commitment to Vote or respond as needed
- WG/TFs to communicate agenda 14 days before the meeting
  - Virtual meetings are highly encouraged- same rules apply to these
- WG/TFs to keep website information current
  - tc-webmaster@ieee.org
- WG/TF Minutes are needed **15** days from meeting (**9th April 2025**)
  - Final to be submitted **May 8th 2025** to TC Secretary

Adcom Highlights

Support All Subcommittees- WG & TF within Transformers

- **Patrycja Jarosz**
- p.jarosz@ieee.org
- +1 908 726 8288

Adcom Highlights

- **WG and SC Officer training :**
  - **Mandatory-** IEEE SA's Mandatory Antitrust training
  - Standards Committee/Working Group Officers within 90 days of appointment.
  - Training is on demand
  - Go to the ILN https://iln.ieee.org [iln.ieee.org] website and login. click on "my Courses.
  - **Recommend everyone to go through the training**

Adcom Highlights

- **Memberplanet:**
  - This week a version is going to be pushed to the Tech Council for testing. However, there is no target date when it will be released.
- **List Serv-email address**
  - Send latest TF/WG Roster to Patrycja
  - She will generate the email address and set you up as admin to be able to change the list as well.
  - Don't have this email on the To: on the email- keep it in the Bcc.
  - Let her know if you want one email address for
    - Members
    - Guests

Adcom Highlights

- **Copyright & Behavior Slides**
  - Copyright and Behavior –links or slides could be send out with the invitation
  - At you WG/TF you ask if the participants have seen it- if not refer them to the link in the invitation- Get an Acknowledgement
  - You do NOT need to show these slides during the meeting
  - The Patent slide – must be shown at each meeting

Adcom Highlights

- **PAR Changes, Modification and Extension**
  - Must have WG Approval
  - Must have SC Approval
- .

Status of Active Standards

Project	Title	Valid Date	PAR Status
C57.127	Guide for the Detection of Acoustic Emissions from Partial Discharges	2028	PAR 2028
C57.160	Guide for the Elec. Measurement of PD in HV Bushing and Instrument Transformers	2033	WG inactive
C57.113	Recommend Practice for Partial Discharge Measurement Power	2034	WG inactive
C57.98	Guide for Transformer Impulse Tests	2021	PAR 2026 Ballot Process

Status of Active Standards

Project	Title	Valid Date	Status
C57.138	Recommended Practice for Routine Impulse Tests for Distribution Transformers	2026	PAR 2026
C57.161	Guide for DFR Measurements	2028	PAR 2028
C57.168	Low Frequency Test Guide	2034	WG inactive
C57.200	Bushing Frequency Domain Spectroscopy Guide	2032	WG inactive

NesCom/RevCom dates

Deadline for 2025 Standard Boards Submissions

Standard Board Meeting	Submittal Deadlines
26th March 2025	
7th of May 2025	**28th of March 2025**
18th of June 2025	**9th of May 2025**

Membership DTSC

- Total Attendees to DTSC F24 meeting: **213**
  - Total Members attended: **104** (out of **155**)
- Requested Membership: **34**
  - Rejected Membership: **17**
  - Approved Membership: **17**
- Change Status Member to Guest due to no compliance with membership attendance requirements: **18**
- **Total Members for Spring 2025 meeting: 156**

Attendance F24

Attendance Summary

	By Roster	By QR code
Total Attendees	213	181
Total # Of Members	155	155
Members Present	104	84
Quorum Present	**YES (67.1%)**	**YES (54.2%)**

Membership DTSC

- Welcome new DTSC Members:

First Name	Last Name
Jason	Beaudoin
Jeffrey	Door
Saif	Hossain
Yeounsoo	Kim
Zan	Kiparizoski
Fernando	Lagos
Luc	Loiselle
José Luis	Machain

First Name	Last Name
Marta	Muñoz
Rakesh	Patel
Eric	Schleismann
Jonathan	Tan
Scott	Thomas
Krishnamurthy	Vijayan
Joe	White
Terry	Wong
Fei	Yang

Membership DTSC

- Total Active Members: **156** (Quorum: **79**)
- Requirements to become a DTSC Member:
  - Attend 3 out of last 5 DTSC meetings
- Requirements to become a WG Member:
  - Attend 2 out of last 3 WG meetings

Members DTSC S25 (156 members)

First Name	Last Name
Kayland	Adams
Alex	Alahmed
Tauhid Haque	Ansari
Stephen	Antosz
Elise	Arnold
Javier	Arteaga
Onome	Avanoma
Donald	Ayers
Christopher	Baumgartner
Jason	Beaudoin
Enrique	Betancourt
Daniel	Blaydon
William	Boettger
Dominique	Bolliger
Jeffrey	Britton
David	Calitz
Juan Alfredo	Carrizales
Camilo	Casallas

First Name	Last Name
Juan	Castellanos
Craig	Colopy
Juan Carlos	Cruz Valdes
Roberto	Da Silva
Eric	Davis
Everton	De Oliveira
Sami	Debass
Gabriel	Delgado
Scott	Dennis
Huan	Dinh
Jeffrey	Door
Samragni	Dutta Roy
Evgenii	Ermakov
Marco	Espindola
Reto	Fausch
Hugo	Flores
Bruce	Forsyth
Raymond	Frazier

First Name	Last Name
Richard	Frye
Miguel	Garcia
Eduardo	Garcia Wild
Rob	Ghosh
Alireza	Gorzin
Shawn	Gossett
Bill	Griesacker
Detlev	Gross
Ravi	Gupta
John	Harley
Roger	Hayes
Ronald	Hernandez
Jean Carlos	Hernandez
Sergio	Hernandez Cano
John	Herron
Thang	Hochanh
Saramma	Hoffman
Philip	Hopkinson

Members DTSC S25 (156 members)

First Name	Last Name
Saif	Hossain
John	John
Akash	Joshi
Kurt	Kaineder
Jerzy	Kazmierczak
Sheldon	Kennedy
Stacey	Kessler
Yeounsoo	Kim
Zan	Kiparizoski
Egon	Kirchenmayer
Evan	Knapp
Fernando	Lagos
David	Larochelle
Fernando	Leal
Moonhee	Lee
Aleksandr	Levin
Weijun	Li
Mario	Locarno

First Name	Last Name
Luc	Loiselle
Xose	Lopez-Fernandez
José Luis	Machain
Tim-Felix	Mai
Brian	McBride
James	McBride
Thomas	Melle
Kent	Miller
Francis	Mills
Juliano	Montanha
Emilio	Morales-Cruz
Marta	Muñoz
David	Murray
Ali	Naderian
Aniruddha	Narawane
Parminder	Panesar
Dwight	Parkinson
Poorvi	Patel

First Name	Last Name
Rakesh	Patel
Harry	Pepe
Sylvain	Plante
Klaus	Pointner
Bertrand	Poulin
Thomas	Prevost
Jarrod	Prince
Khan	Qasim
Ulf	Radbrandt
Ion	Radu
Timothy	Raymond
Scott	Reed
Diego	Robalino
Zoltan	Roman
Rodrigo	Ronchi
Mickel	Saad
Hakan	Sahin
Dinesh	Sankarakurup

Members DTSC S25 (156 members)

First Name	Last Name
Amitabh	Sarkar
Daniel	Sauer
Alan	Sbravati
Markus	Schiessl
Eric	Schleismann
Ewald	Schweiger
Cihangir	Sen
Abdulmajid	Shaikh
Hemchandra	Shertukde
Jonathan	Sinclair
Kushal	Singh
Christopher	Slattery
Steven	Snyder
Sanjib	Som
Mike	Spurlock
Fabian	Stacy

First Name	Last Name
Brad	Staley
Kyle	Stechschulte
Andrew	Steineman
Charles	Sweetser
Janusz	Szczechowski
Matthew	Sze
Jonathan	Tan
Troy	Tanaka
Vijay	Tendulkar
Scott	Thomas
Alwyn	Van Der Walt
Ajith	Varghese
Jason	Varnell
Rogerio	Verdolin
Krishnamurthy	Vijayan
Dharam	Vir

First Name	Last Name
Pragnesh	Vyas
Mike	Waldrop
David	Wallace
David	Wallach
Eric	Weatherbee
Bruce	Webb
Matthew	Weisensee
Drew	Welton
Peter	Werelius
Daniel	Weyer
Joe	White
Barrett	Wimberly
Terry	Wong
Fei	Yang
Kris	Zibert
Waldemar	Ziomek

Today's Sign-in Sheet

Role	First Name	Last Name	Email	New E-mail	3/26/2025	Req. Memb.	Agree e-mail contact
Guest	Mubarak	Abbas	mubarak.abbas@siemens-energy.com				
Guest	Isaac	Abdalla	iabdalla@hicoamerica.com				
Guest	Juan	Acosta	juan.acosta@ergon.com				
Member	Kayland	Adams	kayland.adams@prolec.energy				
Guest	Raj	Ahuja	rajahuja2@gmail.com				
Member	Alex	Alahmed	alahmed.alex@gmail.com				
Guest	Daniel	Aleksandrovich	daniel.aleksandrovich@hitachienergy.com				
Guest	Robert	Allison	robert.l.allison@dominionenergy.com				
Guest	Mihir	Amin	mihirnamin@eaton.com				
Guest	Gregory	Anderson	gwanderson@ieee.org				
Member	Tauhid Haque	Ansari	tauhid.ansari@hitachienergy.com				
Member	Stephen	Antosz	santosz@ieee.org				
Guest	Edmundo	Arevalo	erarevalo@bpa.gov				
Member	Elise	Arnold	elise.arnold@sgb-smit.group				

IEEE PES Power & Energy Society®

IEEE PES 1918 2018 100 YEARS TRANSFORMERS COMMITTEE

QR Code S25 Attendance

Membership (P&P section 4)

https://grouper.ieee.org/groups/transformers/info/TC-PP-2-11-2019.pdf

4.3.1 Requirements for Voting Members

These requirements do not apply to ex-officio voting members.

A voting member of the Sponsor, or a Responsible Subcommittee is required to attend 3 of the last 5 meetings.

Requirements for attaining and continuing membership include the following:

a) Being a member in good standing of the IEEE Power & Energy Society (IEEE-PES) and IEEE Standards Association (IEEE-SA).

b) Contributing regularly as a member of a Responsible Subcommittee and Working Group(s) during a two-year period.

c) Being willing to devote time and effort to contribute to the advance of the art by:

   1. For Sponsor membership, regular attendance at Sponsor meetings and participation at the Subcommittee and Working Group level.
   2. For Responsible Subcommittee membership, regular attendance at Responsible Subcommittee meetings and participation at the Working Group level.
   3. Continued participation in Sponsor functions such as serving as an officer, liaison representative, Responsible Subcommittee member, or Working Group member.
   4. Membership in the IEEE Standards Association (IEEE-SA).

d) When a voting member is absent for more than two consecutive scheduled regular meetings and fails to participate by correspondence, the voting member may be removed from Sponsor or Responsible Subcommittee membership, subject to a review of the circumstances by the respective committee officers

AGENDA – DTSC (Page1 of 2)

A. Welcome

B. Call for patents and Copyright policies

C. Chairman's Remarks

D. Membership Status

E. Attendance & Quorum

F. Approval of Meeting Agenda

G. Approval of Fall 2024 Kansas City Minutes

H. Old/Unfinished Business

I. New Business

AGENDA – DTSC (Page2 of 2)

G. Working Group/ Task Force Reports

• TF - Core Ground & Winding Insulation Resistance	D. Robalino
• TF Revision to Low Frequency Tests	A. Varghese
• TF PD Testing of DTR, Wind & Solar Transformer	
• TF Revision to Impulse Test	S. Plante
• TF Clearance between bushings (Virtual)	T. Ansari
• WG Guide for DFR Test (C57.161)	E. Ermakov
• WG Detection of Acoustic Emissions from PD (C57.127)	D. Gross
• WG C57.138- Recommended Practice for Routine Impulse Tests	H. Sahin
• TF for DFR on Instrumental Transformers	I. Guner
• Liaison Report - HVTT	J. McBride
• TF Transient failure mitigation (WG PC57.142)	J. McBride

H. Adjournment

Minutes Approval- Fall 2024 meeting

IEEE PES TRANSFORMERS COMMITTEE

DIELECTRIC TEST SUBCOMMITTEE

The meeting was held at the Hyatt Regency, St. Louis, Missouri, USA

Dielectric Tests Subcommittee		
Chair: Poorvi Patel	**Vice-Chair: Thang Hochanh**	**Secretary: Diego Robalino**
Room: Grand Ballroom E	**Date:** Wednesday, October 30, 2024	**Time:** 11:00 am to 12:15 pm
Total DTSC Members: **155**	Members present at the meeting: **104**	Attendance according to sign in sheet: **213**
Guests present: **109**	Membership requested: **27**	Membership accepted: **3**
Members moved to Guest Status: **19**		

Chair's Remarks

The SC Chair welcomed members and guests to the fall 2024 meeting in St. Louis, Missouri.

Five sets of the SC roster were distributed for attendance record. SC Secretary requested unanimous approval to record the meeting for the sole purpose of minutes reporting. None are against it, and the meeting is recorded (only voice no video).

Considering the lack of a better system, SC Secretary prepared a QR code for the attendees to record attendance and SC meeting attendees were requested to use it.

Old Business

New Business

- Entity Par- Guide for testing Partial discharge acoustic image of electric power equipment (Detlef)
  - Already a guide C57.127- a section on air-borne acoustic signals captured with the dish-type acoustic detectors. In this section we plan also to cover now the so-called acoustic cameras using the MEMS arrays for beam forming. The aim here is to make sure that there is no external source of the PD and in case identify the external source.
  - Encourage the entity PAR to join this WG
  - The Guide covers the application on transformers as per this proposal, but of course not the application on overhead cables.
  - For the application on overhead cables and other substation equipment shall then be hosted by another PES committee.

New Business- Ajith

- An error in formula in external clearance section- should be corrected before next revision of C57.12.00.
- Should be BSL and not BIL

BSL ~~BIL~~ $= \mathrm{CFO} \times \left(1 - 1.28 \times \frac{\sigma_f}{\mathrm{CFO}}\right)$

AGENDA – DTSC (Page2 of 2)

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H. Adjournment

TF IR and Core Ground Performance and Limits
Chair – Diego Robalino

Quorum: Yes MOM: Approved Agenda: Approved

Highlights:

- Approved MOM from S24 and F24
- Presented data on Core-to-ground and Frame-to-ground and core-to-frame values.
- Data presented for mineral oil and vegetable oil filled units.
- Table to collect data has been presented and changes to be implemented for circulation amongst M&G of this TF
- Discussion regarding the use of this information and where it could be implemented.
- Presentation to be added in TCM website

AGENDA – DTSC (Page2 of 2)

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H. Adjournment

Revision to Low Frequency Tests (RLFT) – Ajith M. Varghese

Quorum: Achieved (43/60) MOM: Approved Agenda: Approved

- There was no old business to discuss
- Sub TF (PD Testing & Limits- DTR, Wind & Solar Transformer) did not meet during S25 TC.
- Two new items were discussed.

Item #1

Proposal by Jason Varnell (Doble Engineering) to investigate revisions to C57.12.90-2021 Subclause 10.9.3 regarding partial discharge calibration.

10.9.3 Calibration

The test circuit shall be calibrated according to IEEE Std C57.113.

- A motion was unanimously approved to form a subtask force to investigate any possible changes and propose text.

Revision to Low Frequency Tests (RLFT) – Ajith M. Varghese

Item #2

Ryan Musgrove (OG&E) brought up a concern with C57.12.90-2021 subclause 10.5.1 Induce Voltage test for transformers with series or multiple connection, that this subclause is listed under clause10.5 Low frequency test and suggested better place could be under clause 10.7 Induce test for distribution and class I transformer and clause 10.8 Induce test for class II transformer

- A motion was unanimously approved to delete the sub clause 10.5.1 and add identical section to Clause 10.7 and 10.8 (Details in next slide)

Sub Clause 10.5.1 (That will be deleted)

Transformers with windings that have multiple connections (series-parallel or delta-wye) and whose connections each have a nominal system voltage of 25 kV or above shall receive two induced tests, one in each connection. If more than one winding has such multiple connections, then the connections in each of the windings shall change between the tests, and the manufacturer shall determine the relative connections for each test. The test voltage and duration (Class I-7200cycle or Class II –one hour test) shall be contingent on the system voltage level of the high-voltage winding for the connection being tested. In all cases, the last induced test shall be for the connection with the highest test voltage.

Sub Clause X.X.X (That will be added under Clause 10.7 and 10.8)

Transformers with windings that have multiple connections (series-parallel or delta-wye) and whose connections each have a nominal system voltage of 25 kV or above shall receive two induced tests, one in each connection. If more than one winding has such multiple connections, then the connections in each of the windings shall change between the tests, and the manufacturer shall determine the relative connections for each test. The test voltage and duration ~~(Class I-7200cycle or Class II –one hour test)~~ shall be contingent on the system voltage level of the high-voltage winding for the connection being tested. In all cases, the last induced test shall be for the connection with the highest test voltage

Motion

Request SC approval for following changes to C57.12.90 to be incorporated into next revision of Test code.

- Delete subclause 10.5.1
- Add below shown subclause and text to

  10.7 Induced-voltage test for distribution and class I transformer and

  10.8 Induced-voltage test for class II transformer

10.7.X Induced-voltage test for transformers with series or multiple connection

Transformers with windings that have multiple connections (series-parallel or delta-wye) and whose connections each have a nominal system voltage of 25 kV or above shall receive two induced tests, one in each connection. If more than one winding has such multiple connections, then the connections in each of the windings shall change between the tests, and the manufacturer shall determine the relative connections for each test. The test voltage and shall be contingent on the system voltage level of the high-voltage winding for the connection being tested. In all cases, the last induced test shall be for the connection with the highest test voltage

10.8.X Induced-voltage test for transformers with series or multiple connection

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H. Adjournment

TF Impulse Test Revisions – Chair Name S. Plante

Quorum: 30/52 MOM: Approved Agenda: Approved

Highlights:

- Survey results on the 10.3.4.1 and 10.4.3.2 comparison of voltage waveforms RW, FW, and CW was reviewed. Motion to circulate a revised text to be determined by Jason Varnell and Dan Sauer to both TF and SC
- New business – current waveform analysis sensitivity – a sub task force of Dan Sauer, Jim McBride, and Bertrand Poulin will meet to determine next steps.

AGENDA – DTSC (Page2 of 2)

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H. Adjournment

Survey On Review of Section 6.8 – Dielectric Clearance

Background

In Fall 2024 meeting Joe Foldi suggested a new business to look at the section 6.8 and if possible, add verbiage to make the clearance requirement clearer to user and manufacturers. Chair of dielectric subcommittee approved a taskforce to work between Fall-2024 and Spring 2025 meeting and suggest necessary changes. The task force reviewed the current paragraph and suggested adding a sentence at the end of first paragraph. This will help user specifying any attachment on the bushing if there is any, in specification. Or the manufacturer will ask for such attachment before designing the transformers.

Survey:

Addition (In red) to section 6.8 to make the dielectric clearance requirement clearer.

6.8 Minimum external clearances of transformer live parts

Table 10 describes the minimum external clearances between transformer live parts to ground and to different
phases. In the establishment of these clearances, it was recognized that bushing ends normally have rounded
electrode shapes. It is also assumed that conductor clamps would be suitably shaped so that they would not
reduce the withstand strengths, and the arrangement of the incoming conductors would not reduce the effective clearances provided by the transformer bushing. In other words, the clearances were established based on electrostatic fields that were usually not divergent. The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the clearances or the design of the clearances.

Survey On Review of Section 6.8 – Dielectric Clearance

Result

Participants	422		
Member	164		
Guest	258		
Result		% of Total Participants	% of total response
Accept with Comment	11	2.6%	9.6%
Accept	81	19.2%	70.4%
Reject with Comment	16	3.8%	13.9%
Reject	0	0.0%	0.0%
Abstain	7	1.7%	6.1%
Total	115	27.3%	

Accept with Comment

Accept with comment
The user should notify the manufacturer in the specification of their intent to use any fitting. shield, etc. in the field that may impact the clearances or the design of the fittings, shield etc. Add the last three words as 👆 and remove clearances
Accept, although I am not a big fan of “etc.” in these documents.
The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the design of the clearances. or the design of the clearances. Instead of the proposed : The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the clearances or the design of the clearances.
The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the clearances and provide the dimensional details to be considered in the design of the transformer / external clearances .or the design of the clearances
We generally accept the proposed statement as an approach; however, we believe that the formulation in IEC 60076-3 is more appropriate: "If the purchaser intends to make the connection in a particular way which is likely to reduce the effective clearances, this shall be stated in the enquiry." Additionally, we believe that a unification of clearances between IEEE C57.12.00 Table 10 and IEC 60076-3 Table 4 needs to be established.
The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the clearances or the design of the clearances. Remove the words “in the specification” since many end users do not have a specification and by having that wording we’re establishing the customer’s specification as the only valid communication document between the user and the manufacturer.
This addition seems to limit the potential for retrofitting of a transformer. I think the minimum clearances should be stated by the manufacturer and the users should maintain those limits or take the responsibility for fittings and/or add-ons that encroach into that area. Keeping in mind the potential for corona inception
It is not practical for a user (or manufacturer) to foresee all possibilities of fittings and shields now and in the future. I agree with the proposed statement using the word “should”. The addition is only a preferred course of action instead of a required course of action
I believe the user will be the one creating the specification that will be submitted with the order, whether or not they are the one submitting the order

Reject with Comment

Reject with comment
My comment as written must be a note to the section as the word “should” doesn’t belong in standard language. This is but a note to the user
The paragraph should state clearly that it does not apply to surge arresters, because these devices need the grading rings or shields for a proper voltage distribution along the arrester
While, I support the idea conceptually, it will be very difficult to implement. Unfortunately many users will not be able to provide fitting types to the manufacturer at the time of specification. Transformers are purchased well before substation design is ever performed. For established utility clients with well-developed standards, the information may be available, however a larger majority of users (smaller utilities with less defined design standards, developers, and contractors) will likely not be able to provide this information until well after it would be needed by the transformer supplier.
I follow the same opinion as Egon. Even if the customer states an intention in their specification without giving details about the dimensions or drawings of the fitting apparatus , that would be difficult for the manufacturer. Egon ´s proposal would be more appropriate. Therefore, I reject the proposal.
I agree with Mr Egon Kirchenmayer comment as below, in my opinion it is more clear. "In case the user plans to use any fitting, shield, etc. in the field which may require higher clearance than the values given in Table 10, then the user should specify the required clearances to the transformer manufacturer in their specification."
The user may not be the one placing the order. It should be replaced by purchaser. Please also review the last seven words in red and consider replacing by “…….clearances or the determination of clearances”.
Same as Sanjib
The proposed addition leaves open the responsibility to define the expected impact on air clearances. The subject is not trivial, as definition of clearances involves testing and, or calculation of electric fields. Corona shields reduce electric field on surface of the electrodes, and they can reduce clearances between phases with similar shields. If that potential reduction of clearances could not be readily estimated, what manufacturers would have to do is just to ignore any benefits and design for air clearances measured between closest points between electrodes
Table 10 already mentioned that bushing normally has rounded electrode shapes, and the selection of such elements should be from the end user. For bushings with voltage shields or connectors, clearances shall be specified by the user, or to be considered from bushings surface to surface. Using a voltage shield will reduce the electric field stress and prevent surfaces discharges improving the allowed clearance. If the end used requires a different clearance can be addressed in the project specification.

Reject with comment

Comment: As a utility engineer responsible for specifying our transformers, I am compelled to identify that the burden here has been placed solely on the user, and not the manufacturer… despite the suggested and inferred TF recommendation of "Or the manufacturer will ask for such attachment before designing the transformers." I suggest that any standards change here supports the need in clear partnership with user and manufacturer. After a quick review of the IEEE SA Style Manual, I would recommend the use of a caution, if possible, as *Cautions* call attention to methods and procedures that have to be followed to avoid damage to equipment (e.g., CAUTION- Fittings, shields, and other bushing hardware or connections that would impact these clearances shall be identified between user and manufacturer to ensure that proper operational clearances are maintained.)

This would be like the existing caution within the same clause…

CAUTION

If there is risk that these clearances will be effectively reduced by the intrusion of birds or animals, the user should specify increased clearances between bushings. This is most important at lower system voltages where clearances between bushings are small. In the case where bushings terminate in a closed junction box for connection to cables, intrusion by birds and animals is unlikely; therefore, the above minimum clearances should be adequate.

Man, this seems like an awful wordy paragraph.
In my transformer specification document, I state center-to-center clearance distances between adjacent live parts.
I also have center of live parts to ground clearances.
This requires that the user and/or the transformer OEM to check the bushing cap diameters, the size of the specified bushing terminal, and if corona rings are to be used.
Because I specify bushings and terminals by OEM and part number, I have those dimensions.
I believe the concern is about the diameter of the corona rings. Corona ring sizes vary by manufacturer, even for bushings with the same voltage rating. Therefore, when corona rings are used, adding an additional amount of distance to the required center-to-center spacings really doesn't work very well.
What I've done is to punt and stated that the center-to-center distances shall be used as the minimum clearance distance between adjacent corona rings. I've got to believe that other utilities have figured out a more elegant solution.
This argument also applies to the spacing of surge arresters, which may also be fitted with corona rings.
Ultimately, utility substation design teams need center-to-center distances, not distances between live parts. So I start with their needs and make sure the clearance distances do not violate IEEE or RUS (rural utility service – for cooperatives) requirements. We've come to agreement on center-to-center clearance distances for all voltage levels used at my utility.
In my experience, transformer outline drawings give center-to-center dimensions.
In the end, I "Accept with comment" the proposed sentence.
It's the rest of the paragraph that's really not great.

Does second paragraph of clearance statement, “bushing ends normally have rounded electrode shapes” refers to **corona ring** attached to the bushing terminals that can reduce the clearance between the HV bushing and adjacent phase or ground terminal?

Reject with comment,
In my opinion in these situations customers typically specify their minimum clearances center to center or minimum clearance between bushings.
I like the idea to make a more clear communication between customer and manufacturer, but “the intent to use a fitting” in my opinion will not be enough.
I propose to add something like: “if user intents to have additional fitting on the bushings, he shall specify minimum clearances between bushings, and bushing to ground”

Reject with Comment

"The user should notify the manufacturer in the specification of their intent to use any fitting, shield, etc. in the field that may impact the clearances or the design of the clearances."
First of all, I am not a bushing engineer, but rather tap changer engineer, however, we face the same challenges in internal tap changers if I am reading the problem statement correctly.
This statement assumes the manufacturer is "approving all modifications or connected devices" in some cases, the manufacturer will not, and can not review all potential individual attachments to their products as these external changes are well beyond the scope of the component design. For these cases, In my opinion, it is recommended to have the OEM do their own field analysis, and determine if by their own best practice, that it is compliant with stress levels.
that being said, I would suggest changing the statement the following way, or at least consider this content to make a new statement:
"The user should verify the net result of the total model of the assembly in a field strength simulation, using the best available techniques at their disposal to maintain the proper field gradient around the device as it was intended. Should any concerns arise with the results, then attempt to correct them with their best practice techniques. Should there still be doubts, at that point, armed with this simulation information, the designer can contact the manufacturer to see if they have any advice or products to remedy the situation."

Egon Kirchenmayer

Reject with Comment

I reject the proposal with comments.

In my opinion the proposed text transfers the responsibility for the selection of the required clearance to the transformer manufacturer, without giving details about the planned shape of the fittings and conductor routing and without mentioning the conditions on site. I think that this will create confusion, therefore, I would propose a change of the red text as follows:

"In case the user plans to use any fitting, shield, etc. in the field which may require higher clearance than the values given in Table 10, then the user should specify the required clearances to the transformer manufacturer in their specification.“

Hugo Flores

I reject Joe Foldi's proposal since I think it will create confusion. However, I support Egon K. (Siemens) proposal as written below:

"In case the user plans to use any fitting, shield, etc. in the field which may require higher clearance than the values given in Table 10, then the user should specify the required clearances to the transformer manufacturer in their specification

Reject with Comment

I reject with comment.
The added sentence does not make clear where the requirement lies for specifying the additional clearances and opens a door for pointing fingers to whom would be at fault if clearances weren't met. Additionally, this section is written poorly and should be reworded completely.
I recommend changing the paragraph to say:
Table 10 outlines the minimum external clearances required between transformer live parts to ground and to different phases. These clearances were established with the understanding that bushing ends usually have rounded electrode shapes. Additionally, it is assumed that conductor clamps are appropriately shaped and that the arrangement of incoming conductors will not reduce the effective clearances provided by the transformer bushing. In other words, the clearances were determined based on non-divergent electrostatic fields. The end user should specify clearance measures, in addition to those specified in Table 10, to account for any fitting, shield, connection, etc. that may impact the design of the clearances for the transformer.
If there is sufficient previous experience indicating that smaller clearances are acceptable, such smaller clearances may be used with agreement from both the user and the manufacturer. The clearances specified in this section are intended for in-service conditions. Factory test conditions may require larger clearances than those defined here.
Minimum external clearances shall comply with Table 10, except where suitable grading of local stresses allows for smaller clearances. The nominal clearance values provided are subject to normal manufacturing tolerances. These tolerances should not significantly increase the likelihood of a flashover since the clearances listed in Table 10 are conservative.

David Calitz

Reject with Comment

This places the clearance/phase spacing responsibility on the manufacturer when the manufacturer may not have all the required details for the hardware, the angles of installation of said hardware and direction of jumpers/leads – I propose the following revised text:

If the clearances given in table 10 will be altered or affected by the user by adding connectors, shields, bus work, etc., the user shall specify (in the specifications) to the manufacturer what the required minimum phase-to-phase clearances are (either metal-metal or, preferably, centerline spacing).

Garrett Bradshaw

Reject with Comment

I suggest changing the sentence to the following:
Intent to use equipment which may affect clearances should be communicated to the manufacturer in the material specification by stating the clearances required or by describing the material and geometry of the equipment.

Accept with Comment

"in the field" can mean various things, especially when discussing electric field, electrostatic field, etc. I assume this proposed phrase is intended to refer to installed & energized/in-service. I recommend replacing "in the field" with "when in service", as called out in the second paragraph of 6.8.

The user should notify the manufacturer in the specification of their intent to use any fitting,
shield, etc. ~~in the field~~ **when in service** that may impact the clearances or the design of the clearances.

Also, instead of appending this as a sentence at the end of the first paragraph, it should be converted to a cautionary note after the first or second paragraph but before Table 10 (e.g. CAUTION- Fittings, shields, and other hardware or connections intended to be applied for service that impact these clearances shall be identified between user and manufacturer to ensure minimum clearances are maintained in service.)

Motion

Setup task force to go through all comments and make necessary changes to currently proposed changes to Sec 6.8 of C57.12.00

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H. Adjournment

WG C57.161 revision – Evgenii Ermakov

Quorum: Yes MOM: Approved Agenda: Approved

Highlights:

- Members for S25 meeting are 42, and 24 members attended the meeting. Set quorum.
- TF Reports
- All four Task Forces reported during the meeting
  - TF 1 – working on Chapter 4, 3 meetings so far, good progress. Remaining work: adding reactors and GST tests with expanded explanation of moisture algorithm.
  - TF 2 – Working on Ch. 5 & 6. Planning first meeting in April.
  - TF3 – working on Ch. 7 - Two meetings. Looking at not overlapping with existing material in the guide. Discussion on the application of DFR for Ester fluids and also the analysis of results on reactors.
  - TF4 – Annexes, Case Studies and Literature review. Three meetings carried out. There is progress in the revision of Annexes and there is with a big demand for case studies.

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H. Adjournment

WG/ C57.127 – Detlev Gross

Quorum: Yes MOM: Approved Agenda: Approved

Highlights:

- Useful contributions were received since our last meeting.
- 2 task forces were created to review the current document and to integrate the new contributions.
- These task forces will meet virtually before the next WG meeting.

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H. Adjournment

WG C57.138 – Chair Name: Hakan Sahin

Quorum: Yes MOM: Approved Agenda: Approved

Highlights:

- 36 individuals attended. 9/13 members present, quorum achieved
- WG continued the review and revisions from section 8.3.3, where we had stopped at the Fall 2024 meeting
- WG completed the review of the complete document during this meeting
- Meeting adjourned on time

AGENDA – DTSC (Page2 of 2)

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H. Adjournment

TF : **DFR on Instrument Transformers** – Ali Naderian

Quorum: Achieved (1st meeting) Members: 25 Guests: 29

Highlights:

- This was the very first meeting of this task force (TF)- Tuesday 11 am
- Statistics from 230kV CT case study in Australia was presented. Peter Werelius presented a summary of cases where DFR was applied for similar cases in Sweden, France and The Netherlands.
- The conclusion from the discussion was that more data and case studies need to be collected before the TF can continue formulate a Title and Scope for a proposal form a WG.
- There will be 3 presentation for Fall 2025 on: 1- Literature review 2- North American OEM case study 3- Detailed overseas case study

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H. Adjournment

Power System Instrumentation and Measurements HVTT Subcommittee Update (Jim McBride)

Standards Activity:

- IEEE 1122 – IEEE Standard for Digital Recorders for Measurements in HV Impulse Tests
  Standard Fully Published (Jeff Britton)
- IEEE 510 – IEEE Guide for Electrical Safety in High-Voltage Testing
  PAR Expired and Resubmitted – Draft Standard is 90% completed(Jeff Hildreth)
- IEEE P4.1 Implementation Guide for IEEE 4
  Draft 8 circulated for WG approval – Uncertainty Estimation and K-Factor(Bill Larzelere)
- IEEE P454 – Guide for the Detection, Measurement and Interpretation of Partial Discharges
  Draft Development last meeting virtual in February (Glenn Behrmann)
- IEEE P2426 – Guide for Field Measurement of Fast-Front and Very Fast-Front Overvoltages in Electric Power System
  Guide is Fully Published (Shijun Xie)
- IEEE 4 – Standard for High-Voltage Testing Techniques
  Draft Development – Target to hold Monthly Virtual Meetings (Jeff Britton)
- IEEE 316 – IEEE Standard Requirements for Direct Current Instrument Shunts
  PAR Approved in December 2024 - Expires Dec 31, 2028 (Switchgear Committee)

Power System Instrumentation and Measurements (PSIM) - HVTT Subcommittee Update

Last Meetings at JTCM in Garden Grove , CA in January 2025

Meeting Activities:

- All PSIM meetings are hybrid or fully virtual
- JTCM – Annually (All PSIM Groups)
- IEEE GM – Annually (Sensors and Electricity Metering)

Upcoming Meetings:

- HVTT Groups – GM, Austin Texas (Hybrid)
- HVTT All Groups – JTCM January, 2026

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  - TF PD Testing of DTR, Wind & Solar Transformer
- TF Revision to Impulse Test — S. Plante
- TF Clearance between bushings (Virtual) — T. Ansari
- WG Guide for DFR Test (C57.161) — E. Ermakov
- WG Detection of Acoustic Emissions from PD (C57.127) — D. Gross
- WG C57.138- Recommended Practice for Routine Impulse Tests — H. Sahin
- TF for DFR on Instrumental Transformers — I. Guner
- Liaison Report - HVTT — J. McBride
- TF Transient failure mitigation (WG PC57.142) — J. McBride

H. Adjournment

Technical Activity Report

WG Switching Transients Ind by Xfmr/Bkr Interaction PC57.142

Chair: Jim McBride Vice-Chair: Xose Lopez-Fernandez Secretary: Tom Melle

Tuesday, March 25th at 11:00 AM in Centennial DE | Denver, CO

1) Welcome and Chair's Remarks
2) Circulation of Attendance Sheets (35 of 44 Members were present - quorum was achieved. 100 guests, Total 135 Attendees)
3) IEEE Patent Policy Slides (one possible patent claim)
4) Approval of Agenda and Minutes from Fall 2024 Meeting
5) C57.142 Ballot status and Comment Resolution – Jim McBride

   Total Comments – 306 (Editorial Required – 107; Editorial Not Required - 109 Technical Required – 67; Technical Not Required – 22)
   Addressed Comments: 306; All Comments Addressed

   Draft 13 has been completed and incorporates all the 306 addressed comments.

Technical Activity Report

WG Switching Transients Ind by Xfmr/Bkr Interaction PC57.142

Chair: Jim McBride Vice-Chair: Xose Lopez-Fernandez Secretary: Tom Melle

. . . Continued

6) The chair presented the response to two comments from the CRG.
7) Recirulation will begin as soon as CRG approves. The CRG has members from both the Transformers and Switchgear Committees.
8) Mitigation Methods Task Force Update – The task force will be presenting a tutorial on mitigation methods at the Fall meeting in Bonita Springs, FL USA.
9) Meeting adjourned at 11:33 AM

QR Code S25 Attendance

AGENDA – DTSC (Page2 of 2)

G. Working Group/ Task Force Reports

• TF - Core Ground & Winding Insulation Resistance	D. Robalino
• TF Revision to Low Frequency Tests	A. Varghese
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H. Adjournment

Annexures