

*Standards Subcommittee,  
WG – C57.152 Revision  
IEEE / PES Transformers Committee*

*November 15, 2021, 12:55PM – 2:10PM, CT  
Virtual meeting*

***UNAPPROVED MINUTES***

**Welcome**

The chair, Marcos Ferreira, opened the meeting at 12:55PM.

**1. Attendance and Attendance for Quorum**

At the time of the meeting there are 47 Members, including Chair, Vice Chair and Secretary. The poll registered 91 participants, where 28 Members, 44 non-members, and 4 guests with unknown status. No answer from 15.

27 members present of 47 mean requirements for quorum was fulfilled. Further analysis of attendance information shows that 34 members were present, and that not all responded to the poll. The list of attendees is shown below:

<b>Name</b>	<b>Affiliation</b>	<b>Status</b>
Ferreira, Marcos	Beale AFB	Chair
Werelius, Peter	Megger	Vice chair
Milojevic, Goran	DV Power	Secretary
Binder, Wallace	WBBinder Consultant	Member
Colopy, Craig	EATON Corporation	Member
Dorris, Don	Nashville Electric Service	Member
Dutta Roy, Samraghi	Siemens Energy	Member
Foata, Mark	Maschinenfabrik Reinhausen	Member
Gara, Lorne	Shermco Industries	Member
Guner, Ismail	Hydro-Quebec	Member
Gustavsson, Niklas	Hitachi Energy	Member
Harley, John	FirstPower Group LLC	Member
Hayes, Roger	General Electric	Member
Heiden, Kyle	EATON Corporation	Member
Hemchandra, Shertukde	University of Hartford	Member
Herron, John	Raytech USA	Member
Kraemer, Axel	Maschinenfabrik Reinhausen	Member
Lejay, Olivier	Huaming USA Corp.	Member
Locarno, Mario	Doble Engineering	Member
Mayer, Robert	Siemens Energy	Member
McNelly, Susan	Xcel Energy	Member
Murray, David	Tennessee Valley Authority	Member
Musgrove, Ryan	OG&E	Member
Plath, Cornelius	OMICRON Energy Solutions GmbH	Member
Pugal, Selvaraj	Virginia Transformer Corp.	Member

Reed, Scott	MVA	Member
Robalino, Diego	Megger USA	Member
Saad, Mickel	Hitachi Energy	Member
Sweetser, Charles	OMICRON electronics Corp USA	Member
Tanaka, Troy	Burns & McDonnell	Member
teNyenhuis, Ed	Hitachi Energy	Member
Verdolin, Rogerio	Verdolin Solutions Inc.	Member
Walia, Sukhdev	New Energy Power LLC	Member
Welton, Drew	Intellirent	Member
Aldenlid, Jennie	Hitachi Energy	Guest
Benzler, Olle	Megger	Guest
Boettger, William	Boettger Transformer Consulting LLC	Guest
Bolar, Sanket	Megger	Guest
Boman, Paul	Hartford Steam Boiler	Guest
Bradshaw, Jeremiah	US Bureau of Reclamation	Guest
Burde, Jagdish	Virginia Transformer Corp.	Guest
Christodoulou, Larry	Electric Power Systems	Guest
Clark, Cloin	AltaLink	Guest
Davis, Eric	Burns & McDonnell	Guest
Elliot, Will	Prolec - GE	Guest
Ellis, Wayne	Memphis Light, Gas and Water	Guest
Ermakov, Evgenii	Hitachi Energy	Guest
Forsyth, Bruce	Bruce Forsyth and Associates PLLC	Guest
Frotscher, Rainer	Maschinenfabrik Reinhausen	Guest
Garcia, Eduardo	Siemens Energy	Guest
Gardner, James	SPX Transformer Solutions	Guest
Graham, James	Weidmann Electrical Technology	Guest
Harper, Robert	Soltex	Guest
Hernandez, Ronald	Doble Engineering	Guest
Hoffman, Gary	Advanced Power Technologies	Guest
Hoffman, Saramma	PPL Electric Utilities	Guest
Hogg, Ryan	US Bureau of Reclamation	Guest
Johnson, Toby	Hunt Electric	Guest
Kadar, Laszlo	Hatch	Guest
Kennedy, Gael R.	GR Kennedy & Associates LLC	Guest
Lamontaigne, Don	Arizona Public Service	Guest
Mangubat, Darrel	Siemens Energy	Guest
McBride, Jim	JMX High Voltage	Guest
Millard, Zack	Great River Energy	Guest
Miller, Phillip	Memphis Light, Gas and Water	Guest
Moleski, Hali	SDMyers, LLC	Guest
Mudryk, Anatoliy	Camlin	Guest
Nield, Kris	Megger	Guest
Niroula, Ashmita	Ergon	Guest
Panesar, Parminder	Virginia Transformer Corp.	Guest
Patel, Rakesh	Hitachi Energy	Guest
Pattabi, Pranav Ketharam	Metsco Energy Solutions	Guest
Peterson, Tim	Nomos Systems	Guest
Pinard, Matthew	Weidmann Electrical Technology Inc.	Guest
Poelma, John	NRG	Guest

Polson, Adam	Arizona Public Service	Guest
Portillo, Alvaro		Guest
Pruente, John	SPX Transformer Solutions	Guest
Rackley, Donnie	RESA Power	Guest
Reagan, John	University of Arizona, Tucson	Guest
Reimer, Jonathan	Fortis BC	Guest
Rock, Patrick	American Transmission Company	Guest
Roizman, Oleg	IntellPower	Guest
Schrom, Wes	Carolina Dielectric Co	Guest
Sharma, Devki	Entergy	Guest
Sinclair, Jonathan	PPL Electric Utilities	Guest
Strongosky, Neil	Memphis Light, Gas and Water	Guest
Tolcachir, Eduardo	Tubos Trans Electric	Guest
Van der Walt, Alwyn	Electrical Consultants, Inc.	Guest
Vermette, Yves	Hubbell	Guest
Wagner, Dieter	Hydro One	Guest
Washburn, Alan	Burns & McDonnell	Guest
Weatherbee, Eric	Hubbell	Guest
Whitehead, Bill	H2scan Corporation	Guest
Zaman, Malia	IEEE SA	Guest
Zemanovic, Kyle	EATON Corporation	Guest
Zhang, Shibao	PCORE Electric	Guest
Zhao, Peter	Hydro One	Guest
Ziebert, Kris	Allgeier Martin	Guest

## **2. Approval of Agenda**

After a motion by Drew Welton, and seconded by Wallace Binder, the group unanimously approved the agenda.

## **3. Approval of Minutes of Meeting from Spring 2021**

After a motion by Shertukde Hemchandra, and seconded by Dave Murray, the group unanimously approved Meeting from Spring 2021.

## **4. Call for Patents**

The chair presented slide 1-4, dated January 2, 2018 informing the IEEE patent policy and participants duty to inform. There were no issues related to patent assurance brought up by attendees in the meeting.

## **5. IEEE Copyright Policy**

The chair presented IEEE-SA Copyright Policy slides 1-2 informing the audience of the policy.

## **6. Chair's Remarks**

“Welcome to the STD. WG C57.152 to work on revision. This is the third virtual meeting and we are going to try to provide the latest on working progress of each task force.”

“We hope this meeting we can have some discussed among the attendees (members and guests) so we can keep progressing to complete the task of the new revision for the document.”

## **7. Task Forces Working Progress Report**

### **TF-1: Section 7.2 – Main Tank Volunteers**

Charles Sweetser (team leader)

The work of the Task Force 1 on the revisions of the Section 7.2 has been completed prior to the Spring 2021 meeting, and the comments have been submitted to the members of WG to vote on whether they will be included. A total of 30 comments out of 130 were selected. Due to insufficient number of votes (only 15 out of 47 members voted to accept), the vote was inconclusive.

The poll will be re-submitted by the WG officers to the members for another vote, together with the comments. Members who already voted in the previous poll do not need to do so again.

### **TF2: Section 7.3 – Bushings Volunteers**

Mario Locarno (team leader)

Mario briefly described the work on the section. The previously proposed material on DFR test was included in this section instead of a separate annex. The section is close to completion, and after remaining minor edits, Mario will submit his work to the WG officers, who will send it to the rest of the WG members for review and vote.

### **TF3: Section 7.4 – Tap Changers Volunteers**

Marcos Ferreira (team leader)

Marcos briefly described the work on the section. Previously proposed additions about the LTC reactors and series transformer devices will not be included in the current revision due to lack of volunteers and limited time remaining. This section is also close to completion, and after remaining minor edits, Marcos will send it to the rest of the WG members for review and vote.

### **TF4: New Annexes: Dynamic Resistance and Vibroacoustic Measurements**

Goran Milojevic

Goran briefly described the work on the two Annexes. Some minor work and revision remain, and the proposed text of the annexes will be sent to the WG members for review and vote by the end of December.

## **8. Old Business Related to the Work that Has Been Done So Far**

Due to need to finalize the work of the WG and the limited time remaining, the chair Marcos Ferreira proposed that new annexes that were proposed at the previous meeting will not be added within the current revision, and that the efforts should be made to finalize the work already started during next year.

Wallace Binder repeated his earlier proposal of addition of column with recommended tests after transportation of power transformers to Table 1 in Section 5.1. A discussion was held on this point, in which Marcos Ferreira, Mario Locarno, Don Dorris and Susan McNelly took part. It was proposed that dew point test should be added to the list. The conclusion of the discussion was that Wallace Binder will take responsibility to run a Task Force (TF-5) among help from Marcos Ferreira and Mario Locarno to review the proposal made by Wallace and determine if the changes can be made within the limited time remaining and finalize by the Spring 2022 Meetings

Goran Milojevic mentioned proposed additions to Section 8 by Sanket Bolar, who responded to a call for volunteers made at the previous meeting and asked for Sanket's permission to send the comments to the rest of the WG for comments. Sanket granted the permission.

## **9. Meeting Adjournment**

A motion to adjourn the meeting was raised by Wallace Binder and seconded by Diego Robalino. The meeting adjourned at 2:05PM

Respectfully submitted,

Marcos Ferreira – Chair

Peter Werelius – Vice Chair

Goran Milojevic – Secretary