

Alternative Gases TF Meeting Minutes

April 25, 2017 –Charlotte, NC, USA



Chair: Nenad Uzelac

Secretary: Karla Trost

Meeting Minutes

1. **Call to Order** Nenad Uzelac

The meeting was called to order at 4:17PM.
2. **Introduction of Members and Guests**
3. **Attendance and Quorum Check**

11 members (out of 28) attended the meeting. There were 60 attendees in total.
4. **Approval of Minutes of March 28th Meeting**
 - The previous meeting minutes had been sent to the TF members was available on iMeet.
 - Motion to approve the minutes by Georges Becker.
 - Seconded by: Neil Hutchins
5. **Ad Hoc Group 5 (AHG5)**
 - A presentation was made by Jean-Marc Willième on work done by this IEC Ad Hoc Group. Information included:
 - There are 25 IEC standards which require other minor adaptations or additional work and investigations.
 - AHG5 proposed that IEC began minor editorial changes now.
 - For more technical changes, each maintenance team should work on their own standards – but should reference recommendations from AHG5.
 - AHG5 has asked TC17 to officially request support from CIGRE in order to investigate the following items:
 - Self-restoring properties
 - Test conversion factors
 - Leakage rate measurements
 - Partial Discharge
 - Aging of the Gas
 - Internal Arc considerations
6. **Nenad reviewed the report:**
 - Of the 54 Switchgear and Substation standards that are impacted by SF6/Alternate gases, 28 need to be adjusted.
 - Some are strictly editorial while many have detailed technical changes.
 - The following recommendations will be made to ADSCOM:

- Make this report available for members of IEEE Switchgear and IEEE Substation committees to reference. The technical report shall be password protected and will be posted in a singular location. A link to the report shall be placed on both IEEE Substation and IEEE Switchgear sites.
- Extend the mandate of the Task Force to edit this document and prepare it for publishing with IEEE Xplore.
- Create liaisons with active CIGRE and IEC Working groups.
- The group present in today's meeting needs to finalize the final recommendation in regards to updating the standards. After much discussion 4 possible recommendations were made:
 - 1) Develop a "common clause" document for insulating gases/ gas mixtures.
 - a. Individual groups may need to revise/ create application guides for items that cannot be covered in the common clause document.
 - 2) Create a guide with recommendations for how to change standards (with details, specifics)
 - 3) Create a guide for "how to evaluate" – break out performance and handling (through the life cycle) issues. + recommendation for a WG (SG and Sub + IEC) to create the guides (one at a time)
 - 4) Update the standard after a gas or gas mixture has been proven to perform as a complete equivalent and replacement gas for SF₆. The gas must be tested using SF₆ as a benchmark and perform equally well..
- Additional discussion led the group to focus on item #3. A straw poll of the present members shows that all were in favor of creating 2 guides (performance and handling) with a combined Substation/Switchgear/IEC working group.

7. New Business

- A recommendation was made that the new working group needed a member who would be involved in updating the IEC 62271-4 guide. Francois Trichon volunteered for this role.

8. Adjournment

The meeting was adjourned at 6:00PM.

Annex: Attendance (Members)

	First Name:	Last name	Member	Company	Present
1	Koustubh	Ashtekar	Regular	Eaton	X
2	George	Becker	regular	Power Engineering	X
3	Jean-Marc	Biasse	corresponding	Schneider	
4	Eldridge	Byron	regular	Schneider	X
5	Pat	DiLillo	regular	ConEd	X
6	John	Eastman	regular	Incon	
7	Arnaud	Ficheux	corresponding	GE	
8	Christian	Franck	corresponding	Swiss Institute of Technology	
9	Lukas	Graber	corresponding	Georgia Tech	
10	Peter	Grossman	corresponding	Siemens	
11	Victor	Hermosillo	regular	Alstom	
12	James	Houston	regular	Southern Co	
13	Roy Neil	Hutchins	Regular	Southern Companies	X
14	Dan	Hrncir	corresponding	Eaton	
15	Martin	Kriegel	Regular	ABB	Excused
16	Carol	Leiter	Regular	BPA	
17	Paul	Leufkens	regular	Power Projects Leufkens	
18	Neil	McCord	regular	Southern States	
19	Ted	Olsen	regular	Siemens	
20	John	Owens	Corresponding	3M	X
21	Carl	Reigart	regular	Hubbell	X
22	David	Rhein	regular	Hubbell	
23	Daniel	Schiffbauer	regular	Toshiba	X
24	Karla	Trost	regular	G&W Electric	X
25	Nenad	Uzelac	regular	G&W Electric	X
26	Mark	Waldron	Regular	National Grid	
27	Jerry	Wen	corresponding	BC Hydro	
28	Li	Yu	corresponding	Eaton	X

Annex: Attendance (Guests – all were present)

First Name:	Last name	Company
Pete	Marzec	S&C Electric Co
Jeff	Brogdon	Georgia Transmission
Rahul	Jain	S&C Electric Co
Francois	Trichon	Schneider Electric
Brian	Roberts	Southern States
Harry	Hirz	T&B ABB
Jeff	Gieger	ABB/Elastimold
Helmut	Heiermein	ABB/Switzerland
Torsten	Wirz	ABB AG
Joe	Kausek	First Eneregy
Anil	Dhawan	ComEd
Sam	Chang	PG&E
Don	Martin	G&W
David	Stone	DTS Technical Services
Harm	Bannink	KEMA
Edwin	Almeida	Southern California Edison
Brendan	Kirkpatrick	SCE
Nathan	Loucks	Hubbell Power System
Laura	Reid	Hubbell Power Systems
Blake	Henard	Hubbell Power Systems
Frank	Lambert	GT/Neetrac
Eddie	Wilkie	Eaton
Lin	Tong	SYET Corporation
Jared	Hines	Eaton
Jan	Weisker	Siemens AG
Mauricio	Aristizabal	ABB
Peter	Glaesman	PCore Elec
David	Baseda	S&C
Wangpei	Li	Eaton
Syed	Rahman	UI
Matt	Williford	Schneider Electric
Alex	Hover	Siemens
Russell	Boyce	Eaton
Dragan	Tabakovic	Meramec
Justin	Palmer	EMD
Anne	Bosma	ABB
Sushil	Shinde	ABB
Chris	Ambrose	Federal Pacific
Wolfgang	Jung	Siemens AG
Terry	Woodyard	Siemens Industry
Travis	Johnson	Xcel Energy
Kennedy	Darko	G&W Electric
Francois	Soulard	Hydro-Québec

Amir	Khosravi	BC Hydro
Jean-Marc	Willieme	IEC AHG5
Brad	Leccia	Eaton
Jeremy	Heusberger	MEPPI
Rich	York	MEPPI
Dave	Nyberg	3M Company