Minutes of Meeting
High Voltage Circuit Breaker Subcommittee

Fall 2023
Catamaran Hotel, San Diego, CA
Thursday, October 12, 2023 from 10:15 to 12:00

The chair called the meeting to order at 10:15.

Introduction of all participants including members and officers.
65 participants in attendance
34 of 54 members present – **quorum OK**.
HVCB members D. Caverly, H. Liu and M. Skidmore were excused.

Chair reviewed IEEE patent slides and asked for participants to report any essential patent claims – none reported.
Chair reviewed IEEE copyright slides and asked participants to report any need for copyright permissions – none reported.
Chair notified participants of the IEEE participant behavior requirements.

Chair asked for a motion to approve the spring 2023 meeting minutes as posted on the switchgear committee website.
Motion: A. Keels
Second: A. Bufi
Discussion: None
The motion was approved by unanimous consent.

Chairman's report:

- **Requested working group chairs to email their meeting minutes to the subcommittee secretary no later than October 26.** daniel.schiffbauer@ieee.org
- Reminder to please not include personal contact information of working group attendees in the meeting minutes – only name and affiliation. There was also some discussion about the working group member contact information that is being circulated to the working group chairs for ERP purposes. This information is for IEEE use only and not to be made public.
- Please sign up for the new Committee Management System (CMS) at: https://ieee.memberplanet.com/v2app/#/member-registration/join
- The chair recognized 2 new HVCB members.
    - Brad Leccia
    - Vernon Toups
- The chair recognized Pat DiLillo who will retire from Consolidated Edison in Q1 2024.
- New participation opportunities are available:
    - CIGRE B3/D1.63 - Guideline for assessing the toxicity of used SF6 gas onsite and in the lab of T&D equipment above 1 kV in substations. Contact Dan Schiffbauer if interested.
    - C37.301 – Test Techniques for Field Partial Discharge Measurements – Revised PAR Study Group. Contact Carl Schuetz if interested.

- Manufacturers are requested to provide input on the topic of increasing contact temperature rise in non-reacting environments from 65 K to 75 K. Contact D. Schiffbauer or J. Hensberger for more information.
- The link below explains how working group officers can complete the roster of working group members in the MyProject system. https://standards-support.ieee.org/hc/en-us/articles/4412967015572-Manage-Group-Rosters#h_01FVJAV1N73WA6HQJV6369Y9N5

External reports:

Technical paper reviews (Kirk Smith):
There were no papers to review on the IEEE papers reviewer site for Transactions on Power Delivery.

Accredited Standards Committee C37 power switchgear (John Webb):

- ANSI C37.54 Indoor AC HVCB applied as removable elements in metal-enclosed switchgear – published. A corrigendum might be required for an issue related to short circuit current levels.
- ANSI C37.57 Switchgear – Metal Enclosed Interrupter Switchgear Assemblies – administratively withdrawn. C37.57 is a companion of C37.20.3 and will be published soon.
- Please contact John Webb if interested to join ANSI C37.

C37.20.6 IEEE Standard for 4.76kV to 38 kV Rated Ground and Test Devices Used in Enclosures (Ron Hartzel):

- No report

C37.100.1 Common requirements for HV power switchgear rated above 1000 V (John Webb):

- Draft circulation in early 2024
- PAR expires 12/2024 – may need extension

C37.122.3 IEEE Guide for Sulphur Hexafluoride (SF6) Gas Handling for High-Voltage (over 1000 Vac) Equipment (Billy Lao)

- No report

C37.122.10 IEEE Guide for Handling Non-Sulphur Hexafluoride (SF6) Gas Mixtures for High Voltage Equipment (G. Becker for Billy Lao)

- Likely need PAR extension

C57.16: IEEE Standard for Requirements, Terminology and Test Code for Dry-Type Air-Core Series Connected Reactors (C. Schuetz for D. Caverly)

- Draft submitted for MEC

C57.142: Guide to Describe the Occurrence & Mitigation of Switching Transients Induced by Transformers, Switching Devices and System Interactions (C. Schuetz for D. Caverly, jointly sponsored by TRFCOM and SWGCOM)

- In ballot and comment resolution

Technology and Innovation Subcommittee (C. Schuetz for A. Cochran)

- Paper discussing 2 p.u. power frequency voltage across the open breaker gap is in final review prior to publishing.
- HVCB liaisons to T&I will be Steven May, Dan Schiffbauer and Kirk Smith.

CIGRÉ Reports:

- Refer to main committee minutes

Old Business:

After the spring 2023 meeting, the HVCB chair notified the standards coordinator of the following:

- C37.012-2022 is published and a motion to disband the working group was passed.
- A motion was passed to submit a PAR for PC37.015 and form a working group.
- C37.11-2022 is published and a motion to disband the working group was passed.
- A motion was passed to submit a PAR for PC37.12 and form a working group.
- A motion was passed to submit a PAR for PC37.12.1 and form a working group.

New Business:

PC37.01 Standard for HVDC Circuit Breakers
Chair: Steven Chen
Secretary: OPEN

- Met once on Monday, October 9
- Joanne Hu resigned as chair and is replaced by Steven Chen, The position of secretary is open.
- Discussion of several technical topics
- PAR expires 2024

PC37.04a Standard for Ratings and Requirements for AC High Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V
Amendment: Changes to construction requirements and clarification of certain related required capabilities
Chair: John Webb
Secretary: Marcus Young

- Met with quorum
- Discussion and progress made on several technical topics
- Need two sessions in the spring 2024 meeting
- PAR expires 2025 – extension not expected

PC37.09a IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
Amendment: Modifications to test procedures
Chair: Jan Weisker
Secretary: Chris Jarnigan

- Met with quorum
- Volunteers needed, several technical topics closed
- Need one session in the spring 2024 meeting (not Tuesday)
- PAR expires 2025 – extension not expected

PC37.010 Application Guide for AC High-Voltage Circuit Breakers > 1000 Vac Rated on a Symmetrical Current Basis
Chair: Andy Keels
Vice Chair: Luke Collette
Secretary: Jeremy Hensberger

- Met twice with quorum
- Next meeting will be virtual planned for January 17
- Need ~80 person room for the spring 2024 meeting
- PAR expires 2025 – extension not expected

P62271-37-013 International Standard for High-Voltage Switchgear and Controlgear – Part 37-013: Alternating Current Generator Circuit-Breakers

- Corrigendum 1 is completed and ballot initiated
- IEEE will adopt the corrigendum while IEC adopts a corrected version

C37.015 IEEE Guide for the Application of Shunt Reactor Switching – PAR Study Group
Chair: Mike Crawford
Secretary: Luke Collette

- PAR is submitted to NESCOM

PC37.016 IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5kV through 245kV
Chair: Neil McCord
Vice Chair: Sudarshan Byreddy
Secretary: Luke Collette

- Met Monday, October 9 with quorum
- L. Collette is now the secretary, S. Byreddy is the vice chair
- Virtual meeting will be held before the spring 2024 meeting
- PAR expires 2025 – extension not expected

P62271-37-082 Standard for Sound Pressure Levels in Switchgear
Chair: Leslie Falkingham
Secretary: Carl Schuetz

- No meeting
- Document is in MEC now
- Next IEEE ballot then IEC review
- PAR expires 2025 – extension not expected

C37.10 IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures
Chair: Todd Irwin
Secretary: Jeff Ward

- Met with quorum
- Working group approved ballot initiation – now forming ballot pool
- Document is in MEC review now
- Comment resolution group is formed
- Request one meeting in spring 2024
- PAR expires 2024 – extension not expected

C37.12 Guide for Specifications of High-Voltage Circuit Breakers (over 1000 V) – PAR Study Group
Chair: Todd Irwin
Secretary: Andy Beckel

- PAR submitted to NESCOM and is on the 12/2023 agenda
- Met ad hoc this week to discuss the draft
- Request one meeting in spring 2024

C37.12.1 IEEE Guide for High-Voltage (> 1000 V) Circuit Breaker Instruction Manual Content – PAR Study Group
Chair: Sam Zaharko
Secretary: Andy Keels

- No meeting
- PAR submitted to NESCOM and is on the 12/2023 agenda
- Request one meeting in spring 2024

Discussion on the merging of HVCB documents:

- Merging 04 and 09 makes good sense
- Previous arguments against consolidation always won out because it was felt that an 04+09 document would be too large.
- An 04+09 document would be too large and difficult to manage revisions – prefer to keep separate.
- IEC 62271-100 covers both ratings and testing in one document.
- IEC working group members tend to be more focused on standards revision – makes a larger standard easier to manage. Anyone can participate in IEEE which leads to a larger, more difficult group to manage.
- IEC 62271-1 Common Clauses helps when managing larger documents. HVCB does not take advantage of C37.100.1 Common Clauses.
- C37.016 is making extensive use of C37.100.1 as part of the current revision. This should reduce future revision workload.
- A taskforce is suggested to report on consolidation.
- Large documents are less manageable for users – prefer to keep separate.
- Prefer to not combine C37.010 Application guide with other documents.
- IAS broke up the “color books” because they were too large but may end up re-combining them.
- Incremental consolidation may be the way to go – start small.
- The consolidation of 04 and 06.1 might be a good initial candidate (general agreement).

Todd Irwin motions to form a taskforce to consider the consolidation of certain HVCB documents, seconded by John Webb. No additional discussion. Motion approved by consensus.
Taskforce volunteers: L. Collette, M. Crawford, T. Irwin, A. Keels, N. McCord, J. Webb, J. Weisker, T. Woodyard
ACTION: HVCB officers to appoint a taskforce lead, define a scope of work and deliverables.

A question was asked about the status of C37.59 Power Switchgear Conversion:
The standard was last published in 2018 and is listed as active on the IEEE-SA website. Within the switchgear committee, this standard falls under ADSCOM where the working group is indicated as "inactive" on the website. No further information is available currently.

Motion to adjourn – K. Smith
Second – P. DiLillo

Attendance:

Family Name	Given Name	Affiliation	10/12/2023
Alexander	Roy	RWA Engineering	
Antantis	Michelle	Duquesne Power and Light	X
Aristizabal	Mauricio	Hitachi Energy	X
Ashtekar	Koustubh	JST Power	X
Bartels	Andreas	Powell Industries	X
Beauchemin	Francis	Hydro Quebec	X
Becker	George	Power Engineers	X
Benedict	Dan	Pennsylvania Power and Light (PPL)	X
Benge	Jonathan	Oklahoma Gas and Electric	X
Bergman	W.J. (Bill)	Bergman& Associates Ltd.	
Bolar	Sanket	Oncor	X
Bosma	Anne	Hitachi Energy	
Brunke	John	Dr. John H. Brunke, P.E.	
Bufi	Arben	Meiden America Switchgear, Inc.	X
Byreddy	Sudarshan	Burns & McDonnell	X
Cary	Stephen	2-phase solutions	
Caverly	David	Trench Ltd.	EA
Chen	Steven	Eaton	
Chovanec	Andrew	Power Grid Components	X
Christian	Michael	ABB	X
Collette	Lucas	Duquesne Power & Light	X
Contreras	Ivan	ABB	X
Crawford	Michael	MEPPI	X
Cunningham	Jason	Southern States	X
Di Lillo	Patrick	Con Ed	X
Di Michele	Federico	KEMA	X
Door	Jeffrey	The H-J Family of Companies	
Dufournet	Denis	Retired	
Dwyer	Pete	Dwyer Enterprises	
Falkingham	Leslie	Vacuum Interrupters Limited	
Flores	Sergio	Schneider Electric	X
Gonzalez	Mauricio		X
Gray	Keith	None	
Guidry	Sean	Omicron Electronics	X

Hanna	Robert	JST Power	X
Hensberger	Jeremy	MEPPI	X
Hermosillo	Victor	GE	X
Hu	Jingxuan (Joanne)	RBJ Engineering	
Hunter	Jennifer	MEPPI	X
Irwin	Todd	GE	X
Jamal	Shah	Avangrid	X
Jarnigan	Christopher	Southern Company	X
Jensen	Darin	Southern States	X
Johnson	David	HVCB	
Keels	Thomas (Andy)	kEElectric Engineering	X
Khan	Umel	ABB	X
Lambert	Stephen	Shawnee Power Consulting, LLC	
Leccia	Brad	Eaton	
Lester	George	Retired (Boston Edison)	
Liu	Hua Ying	Southern California Edison	EA
Livshitz	Albert	Qualus Services	X
Long	Russell (Bill)	Retired	
Lopez	Adrian	Powell Industries	X
Lopez	Leo	WIKA Instrument, LP	X
Ma	Chunming	Burns & McDonnell	X
Marzec	Peter	S&C Electric	X
Masterson	Paul	Meiden America Switchgear, Inc.	X
May	Steven	Southern Company	X
McCord	Neil	KEC Precision	X
Meekins	Gary	Southern States	X
Mitchell	Dave	Mitch and Associates	X
Nelson	Jeffrey	TVA	
Olsen	T	Retired (Siemens Industry)	
Ordein Torres	Fernando	Dominion Energy	X
Orosz	Miklos	CBT&S, Myers Power Products	X
Palazzo	Mirko	Hitachi Energy	X
Peterson	Mark	Xcel Energy	X
Polchinski	Craig	MEPPI	X
Pounders	Isaac	Meiden America Switchgear, Inc.	X
Rexroad	Aaron	Meiden America Switchgear, Inc.	X
Ricciuti	Anthony	Eaton	X
Roberts	Brian	Southern States	X
Roman	Zoltan	General Electric	X
Ross	Hugh	Ross Engineering Corporation	
Santos	Leonel	Schneider Electric	X
Santulli	Jennifer	IEEE SA	X
Schiffbauer	Daniel	Toshiba International Corporation	

Schuetz	Carl	ATC	
Sharma	Devki	Entergy	
Shullaw	John	Retired	
Skidmore	Michael	AEP	EA
Smith	Robert (Kirk)	Retired	X
Steigerwalt	Don	Duke Energy	X
Stone	David	DTS Technical Services	
Tarleton	John	Southern States	X
Toups	Vernon	Siemens Energy	
Trichon	Francois	Schneider Electric	
Usner	Joseph	AEP	EA
Wagner	Charles	Consultant	
Ward	Jeffrey	Doble Engineering	X
Webb	John	ABB	X
Weeks	Casey	Siemens Energy	
Weisker	Jan	Siemens Energy	X
Westerdale	Matt	US Bureau of Reclamation	X
Wolfe	Dan	MEPPI	X
Woodyard	Terrance	Siemens Industry	X
York	Richard	MEPPI	X
Young	Marcus	MEPPI	X
Zaharko	Sam	MEPPI	EA
Zhang	Wei	Southern Company	
			65

NOTE – EA, Excused Absence, does not count against continued membership and does not count toward meeting quorum.

Attachments:

HVCB Meeting Agenda:

HVCB Subcommittee Agenda, 10/12/2023, 10:15-12:00, San Diego, CA

1) **Introduction of Members and Guests** — Carl Schuetz / Dan Schiffbauer

Welcome, Introductions

2) **IEEE Slides**
- Patent slides
- Copyright policy
- Participant behavior

Quorum Check

3) **Approval of Minutes of Previous Meeting**

Approval of Minutes of S23 meeting. Sent to all members via e-mail.

Motion for approval:
Second:

4) **Membership**

Members [a]	Excused Members	Quorum Requirement [b]
51	3	≥ 24 members

a) Does not include new members announced during this meeting.

b) Quorum Count includes Members, Chair and Secretary but not excused members. Membership at the meeting must be ≥ 50%.

Excused members: M. Skidmore, H. Liu, D. Caverly

5) **Chairman's Report**

Chairman (Carl Schuetz)	carl.schuetz@ieee.org	(262) 506-6962
Secretary (Dan Schiffbauer)	daniel.schiffbauer@ieee.org	(713) 540-2968

- WG chairs need to email minutes of their WG meetings to the subcommittee secretary no later than Thursday, October 26.
- Please do not include personal contact information of working group attendees in the meeting minutes – only name and affiliation.
- Please sign up for the new Committee Management System (CMS) at https://ieee.memberplanet.com/v2app/#/member-registration/join
- New HVCB members
  - Brad Leccia
  - Vernon Toups

F23 HVCB Agenda 1 of 9

- Recognition of retirees
  (Any person that has, or will retire before the spring meeting in Fort Lauderdale, FL)
  - Pat DiLillo
- New participation opportunities available:
  - Cigre B3/D1.63 – Guideline for assessing the toxicity of used SF6 gas onsite and in the lab of T&D equipment above 1 kV in substations
  - C37.301 – Test Techniques for Field Partial Discharge Measurements – Revised PAR Study Group
- Jeremy H. and Dan S. request input from manufacturers related to 75 deg. C contact temperature rise limits in NRG (SF6)
- The addition of working group voting members into the MyProject system. The link explains how working group officers can complete the roster within MyProject. https://standards-support.ieee.org/hc/en-us/articles/4412967015572-Manage-Group-Rosters#h_01FVJAV1N73WA6HQJV6369Y9N5

6) Reports of External Working Groups

a) **Technical Paper Reviews** Kirk Smith
b) **ASC C37 Power Switchgear Report** John Webb

HVCB Document Status

Document	Title	Subcommittee(s)	Document	Project	Chair	Comments
PC37.01	**Standard for High Voltage Direct Current Circuit Breakers Above 3200 Vdc**	**HVCB**		**New 5/15/2020 12/31/2024**	**Joanne Hu**	**< 2 years**
C37.04-2018	Standard for Ratings and Requirements for AC High Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.04-2018 Cor 1	Standard for Ratings and Requirements for AC High Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V	HVCB	Published 9/24/2021			
PC37.04a	**Standard for Ratings and Requirements for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V Amendment: Changes to construction requirements and clarification of certain related required capabilities**	**HVCB**		**Amendment 12/8/2021 12/31/2025**	**John Webb**	
C37.06.1-2017	Recommended Practice for Preferred Ratings for High-Voltage (>1000 volts) AC Circuit Breakers Designated Definite Purpose for Fast Transient Recovery Voltage Rise Times	HVCB	Active 12/6/2017 12/31/2027			< 5 years
C37.09-2018	IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.09-2018 Cor 1	IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	HVCB	Published 6/3/2021			
PC37.09a	**Standard Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V Amendment: Modifications to test procedures**	**HVCB**		**Amendment 12/8/2021 12/31/2025**	**Jan Weisker**	
C37.010-2016	IEEE Application Guide for AC High-Voltage Circuit Breakers > 1000 Vac Rated on a Symmetrical Current Basis	HVCB	Active 9/22/2016 12/31/2026			< 4 years
PC37.010	**Application Guide for AC High-Voltage Circuit Breakers > 1000 Vac Rated on a Symmetrical Current Basis**	**HVCB**		**Revision 12/8/2021 12/31/2025**	**Andy Keels**	
C37.011-2018	IEEE Guide for the Application of Transient Recovery Voltage for AC High-Voltage Circuit Breakers	HVCB	Active 2/8/2019 12/31/2029			< 7 years
C37.012-2022	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers Above 1000 V	HVCB	Active 9/21/2022 12/31/2032			< 10 years
IEEE/IEC 62271-37-013-2021	Standard for AC High Voltage (rated above 1000 V) Generator Circuit Breakers for Use with Generators Rated 10 MVA or More	HVCB	Active 9/23/2021 12/31/2031			< 9 years

Document	Title	Subcommittee(s)	Document	Project	Chair	Comments
P62271-37-013-2021 Cor 1	**Standard for AC High Voltage (rated above 1000 V) Generator Circuit Breakers for Use With Generators Rated 10 MVA or More**	**HVCB**		**Corrigendum 3/30/2023 12/31/2027**	**Mirko Palazzo**	
C37.015-2017	IEEE Guide for the Application of Shunt Reactor Switching	HVCB	Active 12/6/2017 12/31/2027			< 5 years
PC37.015	**IEEE Guide for the Application of Shunt Reactor Switching**	**HVCB**		**PAR study group**	**Mike Crawford**	
C37.016-2018	IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5 kV through 245 kV	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.016-2018 Cor 1	IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5kV through 245kV	HVCB	Published 2/11/2022			
PC37.016	**IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5kV through 245kV**	**HVCB**		**Revision 12/8/2021 12/31/2025**	**Neil McCord**	
C37.017-2020	IEEE Standard for Bushings for High-Voltage (over 1000 Vac) Circuit Breakers and Gas-Insulated Switchgear	HVCB/GIS	Active 12/3/2020 12/31/30			< 8 years
IEEE/IEC 62271-37-082-2012	High-voltage switchgear and controlgear – Part 37-082: Standard practice for the measurement of sound pressure levels on alternating current circuit-breakers	HVCB	Active 10/19/2012 12/31/2022			
IEEE/IEC P62271-37-082	**High-voltage Switchgear and Controlgear - Part 37-082: Standard Practice for the Measurement of Sound Pressure Levels on Alternating Current Circuit-breakers**	**HVCB**		**Revision 12/8/2021 12/31/2025**	**Leslie Falkingham**	
C37.10-2011	IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures	HVCB	Inactive-Reserved 10/31/2011 12/31/2021			
PC37.10	**IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures**	**HVCB**		**Revision 2/15/2023 12/31/2024**	**Todd Irwin**	
C37.10.1-2018	IEEE Guide for the Selection of Monitoring for Circuit Breakers	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.11-2022	IEEE Standard Requirements for Electrical Control for AC High-Voltage (>1000 V) Circuit Breakers	HVCB	Active 12/03/2022 12/31/2032			< 10 years
C37.12-2018	IEEE Guide for Specifications of High-Voltage Circuit Breakers (over 1000 Volts)	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.12	**IEEE Guide for Specifications of High-Voltage Circuit Breakers (over 1000 Volts)**	**HVCB**		**PAR study group**	**Todd Irwin**	

Document	Title	Subcommittee(s)	Document	Project	Chair	Comments
C37.12.1-2018	IEEE Guide for High Voltage (>1000V) Recommended Practice for Circuit Breaker Instruction Manual Content	HVCB	Active 12/5/2018 12/31/2028			< 6 years
C37.12.1	**IEEE Guide for High Voltage (>1000V) Recommended Practice for Circuit Breaker Instruction Manual Content**	**HVCB**		**PAR study group**	**Sam Zaharko**	

7) **Reports of ADSCOM and other WG/TF/Study Groups**

   a) PC37.20.6 IEEE Standard for 4.76kV to 38 kV Rated Ground and Test Devices Used in Enclosures (Ron Hartzel)

   b) PC37.100.1 Common Requirements for High Voltage Power Switchgear Rated Above 1000 V (John Webb)

   c) PC37.122.3 IEEE Guide for Sulphur Hexafluoride (SF6) Gas Handling for High-Voltage (over 1000 Vac) Equipment (Billy Lao)

   d) PC37.122.10 IEEE Guide for Handling Non-Sulphur Hexafluoride (SF6) Gas Mixtures for High Voltage Equipment (Billy Lao)

   e) PC57.16: IEEE Standard for Requirements, Terminology and Test Code for Dry-Type Air-Core Series Connected Reactors (David Caverly)

   f) PC57.142: Guide to Describe the Occurrence & Mitigation of Switching Transients Induced by Transformers, Switching Devices and System Interactions (David Caverly) jointly sponsored by TRFCOM and SWGCOM)

   g) Technology and Innovation Subcommittee (Alex Cochran)

8) **CIGRÉ Reports**

Report to Subcommittee (Nenad Uzelac)

9) **Old Business**

   a) Chair to notify the standards coordinator that C37.012-2022 is published and a motion to disband the working group was passed.

   b) Chair to notify the standards coordinator that a motion was passed to submit a PAR for PC37.015 and form a working group.

   c) Chair to notify the standards coordinator that C37.11-2022 is published and a motion to disband the working group was passed.

   d) Chair to notify the standards coordinator that a motion was passed to submit a PAR for PC37.12 and form a working group.

   e) Chair to notify the standards coordinator that a motion was passed to submit a PAR for PC37.12.1 and form a working group.

10) **New Business**

   a) HVCB documents approved by RevCom or published since the last meeting

      i) N/A

b) HVCB working group reports

i) PC37.01 - Standard for High Voltage Direct Current Circuit Breakers Above 3200 Vdc
Chair: Steven Chen
Secretary: OPEN

ii) PC37.04a - Standard for Ratings and Requirements for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V Amendment: Changes to construction requirements and clarification of certain related required capabilities
Chair: John Webb
Secretary: Marcus Young

iii) PC37.09a - Standard Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V Amendment: Modifications to test procedures
Chair: Jan Weisker
Secretary: Chris Jarnigan

iv) PC37.010 - Application Guide for AC High-Voltage Circuit Breakers > 1000 Vac Rated on a Symmetrical Current Basis
Chair: Andy Keels
Secretary: Jeremy Hensberger

v) P62271-37-013 Cor 1 - Standard for AC High Voltage (rated above 1000 V) Generator Circuit Breakers for Use with Generators Rated 10 MVA or More
Chair: Mirko Palazzo
Vice Chair: Anne Bosma

vi) C37.015 PAR Study Group - IEEE Guide for the Application of Shunt Reactor Switching
Chair: Mike Crawford
Secretary: Luke Collette

vii) PC37.016 - IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5kV through 245kV
Chair: Neil McCord
Vice Chair: Luke Collette
Secretary: Scott Lanning

viii) P62271-37-082 - High-voltage Switchgear and Controlgear - Part 37-082: Standard Practice for the Measurement of Sound Pressure Levels on Alternating Current Circuit-breakers
Chair: Leslie Falkingham
Secretary: Carl Schuetz

ix) PC37.10 - IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures

Chair: Todd Irwin
Secretary: Jeff Ward

x) C37.12 PAR Study Group - IEEE Guide for Specifications of High-Voltage Circuit Breakers (over 1000 Volts)
Chair: Todd Irwin
Secretary: Andy Beckel

xi) C37.12.1 PAR Study Group - IEEE Guide for High Voltage (>1000V) Recommended Practice for Circuit Breaker Instruction Manual Content
Chair: Sam Zaharko
Secretary: Mike Crawford

c) Discussion on consolidation of HVCB documents:

The officers would like to discuss opportunities for the long-term consolidation of HVCB documents to reduce interfaces and improve efficiency. In the table below, bold items are undergoing maintenance and like-colored items are candidates for consolidation.

Type	Document	Title	Status	Expires
Standards	**PC37.01**	**Standard for High Voltage Direct Current Circuit Breakers Above 3200 Vdc**	**New**	**???**
	C37.04-2018	**Standard for Ratings and Requirements for AC High Voltage Circuit Breakers with Rated Maximum Voltage above 1000 V**	**Published**	**2028**
	C37.09-2018	**IEEE Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis**	**Published**	**2028**
	IEEE/IEC 62271-37-013-2021	Standard for AC High Voltage (rated above 1000 V) Generator Circuit Breakers for Use with Generators Rated 10 MVA or More	Published	2031
	C37.016-2018	**IEEE Standard for AC High Voltage Circuit Switchers Rated 15.5 kV through 245 kV**	**Revision**	**2028**
	C37.017-2020	IEEE Standard for Bushings for High-Voltage (over 1000 Vac) Circuit Breakers and Gas-Insulated Switchgear	Published	2030
	IEEE/IEC 62271-37-082-2012	**High-voltage switchgear and controlgear – Part 37-082: Standard practice for the measurement of sound pressure levels on alternating current circuit-breakers**	**Revision**	**2022**
	C37.11-2022	IEEE Standard Requirements for Electrical Control for AC High-Voltage (>1000 V) Circuit Breakers	Published	2032
Recommended Practice	C37.06.1-2017	Recommended Practice for Preferred Ratings for High-Voltage (>1000 volts) AC Circuit Breakers Designated Definite Purpose for Fast Transient Recovery Voltage Rise Times	Published	2027
Guide	**C37.010-2016**	**IEEE Application Guide for AC High-Voltage Circuit Breakers > 1000 Vac Rated on a Symmetrical Current Basis**	**Revision**	**2026**
	C37.011-2018	IEEE Guide for the Application of Transient Recovery Voltage for AC High-Voltage Circuit Breakers	Published	2029
	C37.012-2022	IEEE Application Guide for Capacitance Current Switching for AC High-Voltage Circuit Breakers Above 1000 V	Published	2032
	C37.015-2017	**IEEE Guide for the Application of Shunt Reactor Switching**	**Revision**	**2027**
	C37.10-2011	**IEEE Guide for Investigation, Analysis, and Reporting of Power Circuit Breaker Failures**	**Revision**	**???**
	C37.10.1-2018	IEEE Guide for the Selection of Monitoring for Circuit Breakers	Published	2028
	C37.12-2018	**IEEE Guide for Specifications of High-Voltage Circuit Breakers (over 1000 Volts)**	**Revision**	**2028**

Type	Document	Title	Status	Expires
	C37.12.1-2018	IEEE Guide for High Voltage (>1000V) Recommended Practice for Circuit Breaker Instruction Manual Content	Revision	2028

11) Future Meetings

a) Spring 2024: Fort Lauderdale, FL
b) Fall 2024: Oklahoma City, OK
c) Spring 2025: Orlando, FL
d) Fall 2025: Reno, NV
e) Spring 2026: Clearwater Beach, FL

12) Adjourn

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