

**IEEE Switchgear Assemblies Subcommittee Meeting Spring 2024**  
**Meeting Minutes**  
**Westin Fort Lauderdale Beach Resort, Fort Lauderdale, FL**  
**Wednesday, April 3, 2024, 1:30-3:15 PM**

The meeting was called to order by SA S/C Chair, D. Moser, at 1:30 PM on April 3, 2024:

**Attendance**

- Members: 33 of 39 members present – Quorum was met.
- Guests: 51
- Total: 84

Attendance list recorded at the end of the meeting minutes.

**1. Introduction of Members and Guests**

Members and guests introduced as recorded below.

**2. Reviewed IEEE Patent, Copyright slides, and reminder against commercial topics**

Verbal call for any issues– none identified.

**3. Approval of Meeting Agenda**

The Spring 2024 agenda Revision 0 was presented for review.  
Motion to approve agenda by M. Lafond, Second by D.Hrncir.  
Motion approved by unanimous consent.

**4. Approval of SA S/C Meeting Minutes**

[F23 SA SC Minutes R00](#)

Minutes (link above) from the Fall 2023 meeting were posted on-line.  
Motion to approve meeting minutes by M. Lafond, Second by D.Hrncir.  
Motion approved by unanimous consent.

**5. Working Group, Task Force, Study Group & Ad Hoc Status Reports**

- a. C37.20.1 - IEEE Standard for Metal-Enclosed Low-Voltage (1000 Vac and below, 3200 Vdc and below) Power Circuit Breaker Switchgear**  
Mike Lafond: Meeting minutes are provided. Verbal update of WG activities.

WG met with quorum. Draft comments reviewed with good progress. Plan for ballot with comments from this meeting. WG approved PAR extension request and it was submitted but plan to complete a successful ballot ahead of document expiration.

PAR expires 12-31-2024. Documents posted in iMeet Central.

Actions for SA S/C Chair: No further action required.

- b. C37.20.4 - IEEE Standard for Indoor AC Switches (1 kV-52 kV) for Use in Metal-Enclosed Switchgear**  
Bob Cohn: Minutes are provided. Verbal update of WG activities.

WG met with quorum. WG targeting a ballot as soon as possible this year after final comment review. Note that ballot must be initiated before May 11 or new ballot pool will need formed.

PAR extension expires Dec 2025

Actions for SA S/C Chair: No further action required.

- c. C37.20.6 - IEEE Standard for 4.76 kV to 48.3 kV Rated Ground and Test Devices Used in Enclosures**

Ron Hartzel: Minutes are provided. Verbal update of WG activities.

WG met with quorum. Reviewed comments from recirculation ballot. Plan for next recirculation ballot ahead of fall meeting.

Discussion on copyright process and difficulty of obtaining. Doug noted that training will be provided, and this may be discussed in ADSCOM.

PAR expires Dec. 31, 2025

Actions for SA S/C Chair: No further action required.

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- d. **C37.20.7** - IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults  
Dan Hrnir: Minutes are provided. Verbal update of WG activities.  
WG met with quorum. Comments from recirculation ballot were reviewed and addressed in working group meeting. Completed comment review and incorporated comments into next draft ahead of a recirculation ballot. Noted that there is an item around testing GIS that is proposed for an amendment that is out of scope for the recirculation ballots.  
PAR expires Dec 2024  
Actions for SA S/C Chair: No further action required.
- e. **C37.20.7.X** - Guide for Application, Installation, and Use of Switchgear Rated Up to 52 kV Tested for Internal Arc Faults  
M. Lafond: Meeting minutes are provided. Verbal update of PAR SG activities.  
Discussed draft PAR from study group that met last fall 2023.  
Draft PAR reviewed in subcommittee meeting. Reminder that plan is to remove Annex B from C37.20.7 once this guide is completed.  
Discussion around timing of working group based on other activity and deadlines at this time.  
Motion by M. Lafond, second by B. Cohn to form a working group. Motion carried by a majority.  
Actions for SA S/C Chair: No further action required.
- f. **C37.20.9a** - IEEE Standard for Metal-Enclosed Switchgear Rated 1 kV to 52 kV Incorporating Gas Insulating Systems  
Terry Woodyard: Minutes are provided. Verbal update of Working Group activities.  
WG met with quorum. Reviewed comments from recirculation ballot. Plan additional recirculation ballot.  
PAR expires Dec. 31, 2027  
Actions for the SA S/C Chair: No further action required.
- g. **C37.20.10** - IEEE Standard for Definitions for AC (52 kV and Below) and DC (3.2 kV and Below) Switchgear Assemblies  
Dan Delfino: Minutes are provided. Verbal update of WG activities  
WG met with quorum. Reviewed comments from ballot. Brought up the term dummy breaker that is industry jargon and recommended that we replace this term in future standards updates.  
PAR expires Dec. 31, 2025  
Actions for SA S/C Chair: No further action required.
- h. **C37.21** - IEEE Standard for Control Switchboards  
Christo Thomas: Minutes are provided. Verbal update of PAR Study group activities  
WG met between meetings to gain quorum. Met with quorum. Reviewed and discussed changes and incorporated into another draft.  
PAR expires Dec. 31, 2027  
Actions for SA S/C Chair: No further action required.
- i. **C37.23** - IEEE Standard for Metal Enclosed Bus  
Jared Hines: Minutes are provided. Verbal update of WG activities.  
WG met with quorum. Just met quorum by pulling in one member. Reviewed inputs from ad hocs and comments to draft 2. Plan for online ad hoc meetings and circulation of a

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ballot before next meeting. Plan to review comments and incorporate into new draft toward a ballot after spring meeting.

PAR expires Dec. 31, 2024

Actions for SA S/C Chair: No further action required.

- j. C37.24** - IEEE Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear

Terry Woodyard: Minutes are provided. Verbal update of WG activities.

WG met with quorum. Reviewed all comments from latest draft and working group approved going to ballot.

PAR expires Dec. 31, 2026

Actions for SA S/C Chair: No further action required.

- k. C37.81** – IEEE Guide for Seismic Qualification of Class 1E Metal-Enclosed Power Switchgear Assemblies

Russell Boyce: Minutes are provided. Verbal update of SG activities.

WG met with quorum. Reviewed all comments from latest draft and working group approved going to ballot.

PAR expires Dec. 31, 2027

Actions for SA S/C Chair: No further action required.

- l. C37.82** – IEEE Standard for the Qualification of Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations

Russell Boyce: Minutes are provided. Verbal update of SG activities.

First meeting of working group. Draft 1 will be placed in iMeetCentral for comments.

PAR expires Dec. 31, 2027

Actions for SA S/C Chair: No further action required.

- m. C37.122.2** - IEEE Draft Guide for the Application of Gas Insulated Substations 1 kV to 52 kV (This is an ADSCOM document of interest to SA S/C members)

T. Woodyard: Minutes to be provided to ADSCOM. Verbal update of WG activities

No updates.

Actions for SA S/C Chair: No further action required.

**6. Old Business**

- a. IEC Activities**

No update.

Actions for SA S/C Chair: No further action required.

- b. ACS C37** – General Update

No update.

Actions for SA S/C Chair: No further action required.

**7. Membership**

- a. Senior Membership & Award for Young Professionals**

Darryl Moser recognized recent members attaining senior status and encouraged all non-senior members to obtain senior membership status.

Senior Membership url:

[http://www.ieee.org/membership\\_services/membership/senior/index.html](http://www.ieee.org/membership_services/membership/senior/index.html)

- b. Switchgear Assemblies S/C Membership**

D. Moser: Will review with secretary and advise any updates to members.

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**c. Main Committee Membership**

D. Moser: New Main Committee member recommendations will be made by SA S/C to the Main Committee for consideration.

**8. New Business**

**a. Start revisions to / seeking WG Chairs: – D. Moser**

1. C37.20.9
2. C37.121

**b. WG / Study Group Chairs – Required information**

All 3 of the following need to be sent to the SA Subcommittee Secretary no later than Friday, April 19, 2024.

Email address: [jaredkhines@ieee.org](mailto:jaredkhines@ieee.org)

1. **SA Document Status** – Required action / review of “SA Document Status”
2. **WG Meeting Room Requests** – for Fall 2024
3. **Working Group Minutes** – from this week’s meetings

**c. Getting ANSI certification on standards**

K. Flowers, D. Edwards shared list of standards that have lost ANSI certification and discussed action plan approach to regain ANSI certification that has lapsed and specific standards that need work.

IEEE Standards Association issue led to losing ANSI certification on documents.

Main Committee has updated standard work to include ANSI PIN certification for all documents being presented for revision.

PAR needed for reaffirmation of the document to achieve ANSI certification.

**d. ADSCOM** – Items for SA S/C Chair to discuss at ADSCOM meeting

**e. Main Committee Meeting Items – Review items to be presented**

Total: 14 documents

Active PARs: 11 - C37.20.1, C37.20.4, C37.20.6, C37.20.7, C37.20.9a, C37.20.10, C37.21, C37.23, C37.24, C37.81, C37.82

2024 Ballot Activity: 3 – C37.20.6, C37.20.7, C37.20.9a

Upcoming PAR Activity: None

Not Active: 3 - C37.20.2, C37.20.3, C37.121

**f. Upcoming Meetings**

1. Fall 2024: Oklahoma City, OK
  - i. Note from D. Edwards that we will revert to Fall 2023 schedule at next meeting.
2. Spring 2025: Orlando, FL
3. Fall 2025: Reno, NV

**9. Adjourn**

Meeting adjourned at approximately 3:00 PM.

Reported by:

Jared Hines  
Switchgear Assemblies Subcommittee Secretary

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**Attendance Record**

First Name	Last Name	Company	Role	4/3/2024
Darryl	Moser	ABB	Chair	✓
Jared	Hines	Eaton	Secretary	✓
Paul	Barnhart	Underwriters Laboratories	Member	✓
Russell	Boyce	Eaton	Member	✓
Robert	Burns	Eaton	Member	✓
Ted	Burse	Powell Industries, Inc	Member	✓
Clint	Carne	Schneider Electric	Member	✓
Alex	Cochran	G&W Electric	Member	✓
Robert	Cohn	Powercon Corp.	Member	✓
Randall	Creach	Avail Switchgear Systems	Member	✓
Daniel	Delfino	ABB	Member	✓
Jeffrey	Door	The H-J Family of Companies	Member	✓
Doug	Edwards	Siemens Industry, Inc.	Member	✓
Sergio	Flores	Schneider Electric Inc. USA	Member	✓
Keith	Flowers	Siemens Industry, Inc.	Member	✓
Chris	French	Beta Engineering	Member	✓
Dave	Gohil	Avail Switchgear Systems	Member	✓
Lou	Grahor	Eaton Corporation	Member	✓
Ronald	Hartzel	Eaton Corporation	Member	✓
Tom	Hawkins	Siemens Industry, Inc.	Member	✓
Dan	Hrncir	Eaton	Member	✓
Michael	Lafond	Underwriters Laboratories	Member	✓
Albert	Livshitz	Qualus Services	Member	✓
Jeff	Mizener	Siemens Industry, Inc.	Member	✓
Terry	Neighbours	ABB Inc.	Member	✓
Mark	Roberson	Avail Bus Systems	Member	✓
Carl	Schneider	Schneider Electric	Member	✓
Garett	Sims	Eaton Corp.	Member	✓
Kevin	Sippel	Eaton Electric	Member	✓
Donald	Swing	Powell Industries	Member	✓
Christo	Thomas	Schneider Electric	Member	✓
Michael	Wactor	Powell Industries, Inc	Member	✓
Terrance	Woodyard	Siemens Industry, Inc.	Member	✓
Andreas	Bartels	Powell Industries	Guest	✓
Francis	Beauchemin	Hydro-Quebec	Guest	✓
Andy	Beckel	Xcel Energy	Guest	✓
Bob	Behl	JST Power Equipment	Guest	✓
Siddangoud	Biradar	Eaton	Guest	✓

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First Name	Last Name	Company	Role	10/12/2023
Christopher	Bridges	Eaton	Guest	✓
Sudarshan	Byreddy	Burns & McDonnell	Guest	✓
Fiori	Coziuc	S&C	Guest	✓
Arkadiusz (Erik)	Doroz	Eaton	Guest	✓
Marc	Foster	Schneider Electric	Guest	✓
Juan	Gill	Southern States	Guest	✓
Bruce	Hack	National Breaker	Guest	✓
Robert	Hanna	JST Power Equipment	Guest	✓
Erin	Hardy	Eaton	Guest	✓
Oliver	Hartmann	Siemens	Guest	✓
Mark	Heiny	ABB Inc.	Guest	✓
Tyler	Holp	Eaton	Guest	✓
Terry	Hunt	Westinghouse	Guest	✓
Sudesh	Jaggernaut	Florida Power & Light	Guest	✓
John	Kaminski	Siemens	Guest	✓
J. Dakota	Leopard	Eaton	Guest	✓
Adrian	Lopez	Powell	Guest	✓
Kevin	McGlown	JST Power Equipment	Guest	✓
Ken	McKinney	UL	Guest	✓
Henning	Milnikel	Siemens	Guest	✓
Tad	Myers	Salt River Project	Guest	✓
Anthony	Natale	HICO America	Guest	✓
Sumitabha	Pal	Schneider Electric	Guest	✓
Owen	Parks	ABB	Guest	✓
Lalit	Patil	Eaton	Guest	✓
Mark	Pattison	The H-J Family of Companies	Guest	✓
Mark	Peterson	Xcel Energy	Guest	✓
Paul	Rakus	Eaton	Guest	✓
Jeffery	Ricker	SCHNEIDER ELECTRIC	Guest	✓
Daniel	Rivera Morales	Hydro-Quebec	Guest	✓
Ryan	Rowe	TCI	Guest	✓
Amy	Rowell	Schneider Electric	Guest	✓
Artyom	Runov	S&C Electric Canada	Guest	✓
Wahaj	Saleem	Siemens	Guest	✓
Leonel	Santos	Schneider Electric	Guest	✓
Jen	Santulli	IEEE-SA	Guest	✓
Benjamin	Sax	Nashville Electric Service	Guest	✓
Aniket	Shirode	ABB	Guest	✓
Lokesh	Solanki	ABB	Guest	✓
Valeria	Tama	JST Power Equipment Inc.	Guest	✓

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Bryan	Tatum	UL	Guest	✓
Francois	Trichon	Schneider Electric	Guest	✓
Jacob	Walgenbach	Siemens Industry, Inc.	Guest	✓
Jonathan	Wear	JST Power Equipment	Guest	✓
Mina	Youssef	Eaton	Guest	✓
Li	Yu	Eaton	Guest	✓