

Minutes of Meeting
Working Group C37.015 Guide for the Application of Shunt Reactor Switching

Location: Omni Oklahoma City Hotel, Oklahoma City, Oklahoma

Date: Wednesday October 16th, 2024 (1:30-3:15 PM)

Participants: 44 Total in Attendance (25 of 45 Members -56%)

WG Chair: Mike Crawford

WG Secretary: Luke Collette

Call to Order

WG Chair was unable to attend so the WG Secretary called the meeting to order and presided over the WG meeting.

Introduction of Attendees

Roster distributed and attendance recorded. 44 Total in Attendance (25 of 45 Members -56%). Quorum met.

IEEE Copyright Policy and Call for Patents

Patent and copyright policy presented. WG Secretary made a call for any known essential patents. No Patent claims identified.

Membership

WG Secretary presented Working Group membership list.

Approval of Agenda

WG Secretary reviewed the agenda.

- Motion to Approve Agenda: Carl Schuetz
- 2nd to Motion: Mike Skidmore
- Approved by unanimous consent

Approval of Previous MOM

WG Secretary reviewed the previous MOM.

- Motion to Approve MOM: Carl Schuetz
- 2nd to Motion: Steve May
- Approved by unanimous consent

Current Status

The approved PAR was reviewed to show the work required to be done. Moving forward with balloting to obtain ANSI accreditation was discussed.

Review of Actions from Last Meeting

Items brought up during the previous WG meeting to be included in the revision were presented.

Plan Moving Forward

WG decided on the following plan:

- WG to hold a virtual meeting for updates on individual tasks in early February
- Individual tasks to be completed by the end of February
- Draft D1 of the document to be completed by early March
- WG to review the draft and provide comments during the Spring in-person meeting
- Comments to be incorporated before the Fall in-person meeting and Draft D2 completed
- Updated Draft D2 to be reviewed during the Fall in-person meeting
- Plan is to request from HVCB to initiate the balloting process during the Fall in-person meeting

The following are the individual tasks that the WG decided to incorporate into Draft D1:

Study Guidance for Reactor Switching

- Volunteer group lead: Luke Collette
- Volunteer group members:
 - Sudarshan Byreddy
 - Mark Peterson
 - Craig Polchinski
 - Jan Weisker
 - Jerry Wen
 - Marcus Young

Clause 4 Limitation of Overvoltages (Mediation Table 1)

- Volunteer group lead: Carl Schuetz
- Volunteer group:
 - Andy Beckel
 - Jeff Brogdon
 - Victor Hermosillo
 - Mathieu Lebrun
 - Craig Polchinski
 - Mike Skidmore
 - Jerry Wen

Survey of In Service Experience

- Volunteer group lead: Lissy Diaz
- Volunteer group:
 - Victor Hermosillo
 - Todd Irwin

- Carl Kurinko
- Ramaprasad Lakshminarayana
- Vincent Marshall
- Carl Schuetz

Delayed Current Zero

- Volunteer group lead: Mathieu Lebrun
- Volunteer group:
 - Craig Polchinski
 - Jeremy Sneath
 - Jan Weisker
 - Marcus Young

Chopping Current for VCB

- Volunteer group lead: Luke Collette
- Volunteer group:
 - Jan Weisker
 - Mike Crawford

Shunt Reactor Capacitance

- Volunteer group lead: Craig Polchinski
- Volunteer group:
 - Luke Collette

Restrike or Reignition Monitoring

- Volunteer group lead: Dan Benedict
- Volunteer group:
 - Mike Crawford
 - Luke Collette

General Review of Document

- Volunteer group lead: Dan Benedict
- Volunteer group:
 - Carl Kurinko
 - Sanket Bolar
 - Michelle Antantis

Next Meeting

The following two meetings are planned:

- Virtual Meeting to be scheduled for early February 2025
- Next in-person meeting to be held Spring 2025: April 6-11, Orlando, FL

Adjournment

Meeting adjourned by the WG Secretary at 2:30 PM.

Reported by:

Luke Collette

WG Secretary



Working Group

C37.015
Guide for the Application of Shunt Reactor Switching

Chair: Mike Crawford; Secretary: Lucas Collette

October 16, 2024

Agenda

- Call to Order
- Introduction of Attendees
 - Sign-in Sheet
- Review of Patent and Copyright Slides
 - Call for patents
- Membership List
- Approval of Agenda
- Approval of Previous MOM
- Current Status
- Review of Actions from Last Meeting
- Plan Moving Forward
- Next Meeting
- Adjournment

IEEE SA Copyright Policy

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

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 SASB Operations Manual)
 - <https://standards.ieee.org/about/policies/opman/sect6.html>

IEEE SA Patent Slides

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**

IEEE SA Patent Slides

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

IEEE SA Patent Slides

OTHER GUIDELINES FOR IEEE WORKING GROUP MEETINGS

- All IEEE SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
 - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
 - Don't discuss specific license rates, terms, or conditions.
 - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
 - **Technical considerations remain the primary focus.**
 - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
 - Don't discuss the status or substance of ongoing or threatened litigation.
 - Don't be silent if inappropriate topics are discussed. Formally object to the discussion immediately.

For more details, see *IEEE SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

IEEE SA Patent Slides

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**

Voting Members (45)

- Michelle Antantis
- Andy Beckel
- Dan Benedict
- Sanket Bolar
- Jeff Brogdon
- Arjan Bronsveld
- Arben Bufi
- Sudarshan Byreddy
- Andrew Chovanec
- Michael Christian
- Lucas Collette
- Mike Crawford
- Jason Cunningham
- Matthew Cuppett
- Lissy Diaz
- Victor Hermosillo
- Andy Keels
- Carl Kurinko
- Chunming Ma
- Vincent Marshall
- Paul Masterson
- Steven May
- Gary Meekins
- Andreas Nanning
- Fernando Ordein
- Mark Peterson
- Damian Podgorski
- Craig Polchinski
- Javier Ratmiroff
- Jon Rogers
- Dan Schiffbauer
- Carl Schuetz
- Aniket Shirode
- Michael Skidmore
- Jeremy Sneath
- John Tarleton
- Vernon Toups
- John Webb
- Casey Weeks
- Jan Weisker
- Jerry Wen
- Rich York
- Marcus Young
- Mina Youssef
- Sam Zaharko

WG Voting

- Approval of Agenda
- Approval of [Previous MOM](#)

Agenda

- Call to Order
- Introduction of Attendees
 - Sign-in Sheet
- Review of Patent and Copyright Slides
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- Current Status
- Review of Actions from Last Meeting
- Plan Moving Forward
- Next Meeting
- Adjournment

Current Status

PAR Approved

- Link to [PAR](#)

Plan is to focus on key tasks in this revision and go to ballot as soon as possible in order to obtain ANSI accreditation.

Review of Actions from Last Meeting

Items Discussed During Last Meeting for this Revision

Proposed Tasks for this Revision

- Study Guidance for Reactor Switching
- Clause 4 Limitation of Overvoltages (Mediation Table 1)
- Survey of In Service Experience
- Delayed Current Zero
- Chopping Current for VCB
- Shunt Reactor Capacitance
- Restrike or Reignition Monitoring
- General Review of Document

Target ballot in 2025 to obtain ANSI accreditation. Scope of the PAR includes guidance for performing studies. What else do we include?

[Link to Previous MOM](#)

Plan Moving Forward

Goal for the Meeting Today

- Agree on items to include in the draft
 - Assign leads and deadlines for each item
- Agree on timeline to complete draft and seek approval for balloting

Plan Moving Forward

- **Study Guidance for Reactor Switching**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Luke Collette**
- **Clause 4 Limitation of Overvoltages (Mediation Table 1)**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Carl Schuetz**
- **Survey of In Service Experience**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Lissy Diaz**
- **Delayed Current Zero**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Mathieu Lebrun**
- **Chopping Current for VCB**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Luke Collette**
- **Shunt Reactor Capacitance**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Craig Polchinski**
- **Restrike or Reignition Monitoring**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Dan Benedict**
- **General Review of Document**
 - Include or Remove for this revision: **INCLUDE**
 - Volunteer group lead: **Dan Benedict**

Plan Moving Forward

- **Tasks Completed and Recommendations Provided to WG Officers**
 - Due Date: February 2025
- **Draft Revision Completed and Ready for Review of WG**
 - Due Date: March 2025
- **WG Completes Review of Draft and Provides Comments for Discussion**
 - Due Date: Spring In-Person Meeting: April 2025
- **WG Vote to Request Approval from Standards Committee to Initiate SA Ballot Process**
 - Due Date: Fall In-Person Meeting: October 2025

Next Meeting

- Next Virtual Meeting
 - Date: February 2025 (To Be Scheduled)
- Next In-Person Meeting
 - Spring 2025: April 6-11, Wyndham Grand Resort Bonnet Creek, Orlando, FL

Adjourn

**IEEE PES Switchgear Committee
HVCB C37.015 - Meeting Roster**

Place / Date of meeting: Omni Oklahoma City Hotel, Oklahoma City, Oklahoma

| Initial to denote attendance | Last name | First name | Company name | Role | Request Membership |
|------------------------------|-------------|------------|---|-------------------|--------------------|
| | Antantis | Michelle | Duquesne Light Co. | Voting Member | |
| MA | Aristizabal | Mauricio | Hitachi Energy | Non-Voting Member | |
| | Beckel | Andy | Xcel Enegy | Voting Member | |
| | Beecher | Zachary | Southern States | Non-Voting Member | |
| DB | Benedict | Dan | PPL | Voting Member | |
| | Benge | Jonathan | OG&E | Non-Voting Member | |
| | Bolar | Sanket | Oncor | Voting Member | |
| | Bornuat | Albane | GE Grid Solutions | Non-Voting Member | |
| | Brogdon | Jeff | Georgia Transmission | Voting Member | |
| | Bronsveld | Arjan | Hitachi Energy Sweden | Voting Member | |
| | Bufi | Arben | Meiden America Switchgear | Voting Member | |
| | Byreddy | Sudarshan | Burns & McDonnel | Voting Member | |
| | Chovanec | Andrew | Power Grid Components | Voting Member | |
| | Christian | Michael | ABB | Voting Member | |
| X | Collette | Lucas | Duquesne Light Co. | Secretary | |
| | Crawford | Mike | Mitsubishi Electric Power Products, Inc | Chair | |
| JK | Cunningham | Jason | Southern States | Voting Member | |
| MDC | Cuppett | Matthew | Hitachi Energy | Voting Member | |
| LD | Diaz | Lissy | Florida Power & Light | Voting Member | |
| | Eastman | Maxwell | Black & Veatch | Non-Voting Member | |
| WJD | Hermosillo | Victor | GE Grid Solutions | Voting Member | |
| | Hirz | Harry | Vesco | Non-Voting Member | |
| JK | Irwin | Todd | GE Grid Solutions | Non-Voting Member | |
| CKJ | Jarnigan | Chris | Southern Company | Non-Voting Member | |
| | Keels | Andy | kEElectric Engineering | Voting Member | |
| CRJ | Kurinko | Carl | Hitachi Energy | Voting Member | |
| | Lopez | Leo | Wika | Non-Voting Member | |
| | Ma | Chunming | Burns & McDonnel | Voting Member | |
| VM | Marshall | Vincent | Southern Company | Voting Member | |
| | Masterson | Paul | Meiden America Switchgear | Voting Member | |
| | May | Steven | Southern Company | Voting Member | |
| | McCord | Neil | KEC Precision | Non-Voting Member | |
| MM | Meekins | Gary | Southern States | Voting Member | |
| | Nenning | Andreas | Omicron Electronics | Voting Member | |
| | Ordein | Fernando | Dominion Energy | Voting Member | |
| | Orosz | Miklos | CBT&S LLC | Non-Voting Member | |
| | Peterson | Mark | Xcel Enegy | Voting Member | |
| | Pingle | Sachin | ABB | Non-Voting Member | |
| | Podgorski | Damian | Sargent & Lundy | Voting Member | |
| | Polchinski | Craig | Mitsubishi Electric Power Products, Inc | Voting Member | |
| JK | Ratmiroff | Javier | GE Grid Solutions | Voting Member | |
| JR | Rebovich | Justin | GE Grid Solutions | Non-Voting Member | ✓ |
| BAR | Roberts | Brian | Southern States | Non-Voting Member | |
| | Rogers | Jon | Siemens Energy | Voting Member | |
| DS | Schiffbauer | Dan | Toshiba International Corp | Voting Member | |

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| | Beckel | Andy | Xcel Enegy | Voting Member | |
| <i>Tab</i> | Beecher | Zachary | Southern States Power Grid Component | Non-Voting Member | <i>Y Tab</i> |
| | Benedict | Dan | PPL | Voting Member | |
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| | Bolar | Sanket | Oncor | Voting Member | |
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| | Bufi | Arben | Meiden America Switchgear | Voting Member | |
| | Byreddy | Sudarshan | Burns & McDonnel | Voting Member | |
| <i>ALC</i> | Chovanec | Andrew | Power Grid Components | Voting Member | |
| | Christian | Michael | ABB | Voting Member | |
| <i>X</i> | Collette | Lucas | Duquesne Light Co. | Secretary | |
| | Crawford | Mike | Mitsubishi Electric Power Products, Inc | Chair | |
| | Cunningham | Jason | Southern States | Voting Member | |
| | Cuppett | Matthew | Hitachi Energy | Voting Member | |
| | Diaz | Lissy | Florida Power & Light | Voting Member | |
| | Eastman | Maxwell | Black & Veatch | Non-Voting Member | |
| | Hermosillo | Victor | GE Grid Solutions | Voting Member | |
| | Hirz | Harry | Vesco | Non-Voting Member | |
| | Irwin | Todd | GE Grid Solutions | Non-Voting Member | |
| | Jarnigan | Chris | Southern Company | Non-Voting Member | |
| | Keels | Andy | kEElectric Engineering | Voting Member | |
| | Kurinko | Carl | Hitachi Energy | Voting Member | |
| <i>X</i> | Lopez | Leo | Wika | Non-Voting Member | <i>Y</i> |
| | Ma | Chunming | Burns & McDonnel | Voting Member | |
| | Marshall | Vincent | Southern Company | Voting Member | |
| | Masterson | Paul | Meiden America Switchgear | Voting Member | |
| <i>X</i> | May | Steven | Southern Company | Voting Member | |
| <i>AM</i> | McCord | Neil | KEC Precision | Non-Voting Member | <i>Non</i> |
| | Meekins | Gary | Southern States | Voting Member | |
| | Nenning | Andreas | Omicron Electronics | Voting Member | |
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| | Orosz | Miklos | CBT&S LLC | Non-Voting Member | |
| <i>X</i> | Peterson | Mark | Xcel Enegy | Voting Member | |
| | Pingle | Sachin | ABB | Non-Voting Member | |
| <i>D.P.</i> | Podgorski | Damian | Sargent & Lundy | Voting Member | |
| | Polchinski | Craig | Mitsubishi Electric Power Products, Inc | Voting Member | |
| | Ratmiroff | Javier | GE Grid Solutions | Voting Member | |
| | Rebovich | Justin | GE Grid Solutions | Non-Voting Member | |
| | Roberts | Brian | Southern States | Non-Voting Member | |
| | Rogers | Jon | Siemens Energy | Voting Member | |
| | Schiffbauer | Dan | Toshiba International Corp | Voting Member | |

