

Working Group
PC37.10 Guide for Investigation, Analysis, and Reporting of CB Failures
Wednesday October 19, 2022, 8:00 to 9:45AM EDT
Spring 2022 Meeting Burlington, VT

Chair: Neil Hutchins
Secretary: Todd Irwin

Agenda Item	
1	Call Meeting to Order
The meeting was called to order by the Chair at 8:08AM	
2	Introduction of Members & Guests, circulation of roster
Attendance is attached to these minutes	
3	Review IEEE Patent, Behavior and Copyright Policy slides
<p>https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf</p> <p>https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/copyright-policy-WG-meetings.potx</p> <p>Patent policy slides were shown, and a link is provided in the minutes.</p> <ul style="list-style-type: none"> • That the chair provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard • There were no respondents 	
4	Attendance and Quorum Check
There were 27 in attendance. members (14) and guests (13) Quorum was confirmed with 14/21 members	
5	Agenda Review and Approval
<p>1st John Webb 2nd Jeff Ward No objections or abstentions Approved by acclamation</p>	
6	Approval of minutes of previous meetings (Fall 2021)
<p>1st Keith Flowers 2nd Jeff Ward No objections or abstentions Approved by acclamation</p>	
7	PAR status
<ul style="list-style-type: none"> • Approved Dec 2020 • Expires Dec 31, 2024 • C37.10-2011 is inactive 	
8	Review of draft
<ul style="list-style-type: none"> • The current draft version was reviewed during the meeting and additional suggestions were made. <ul style="list-style-type: none"> ○ Minor editorial changes ○ Add reference (Bibliography) for NATF Equipment Problem Coding Process Reference Document which contains a problem coding process ○ Consider adding Major and Minor failure classifications to the reporting form 	

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Agenda Item	
	<ul style="list-style-type: none"> ▪ Will need to add definition for each ▪ Will need to add explanation of use of this classification ○ Need to verify all references to “Circuit Breaker” also include “Circuit Switcher” ○ Need to validate/update Bibliography ○ Confirmed that the failure report form can be “editable”. The editable PDF will be made available separately and must be submitted with the draft document for the balloting process. <ul style="list-style-type: none"> ▪ Current version of the form is available at the IEEE website: https://standards.ieee.org/downloads/ • Draft 2.2 will be circulated to the members prior to the next virtual meeting
9	Other Discussion/New Business <ul style="list-style-type: none"> • Chair Neil Hutchins cannot longer participate, and Todd Irwin will take over as Chair subject to appointment by HVCB chair. Jeff Ward has volunteered as Secretary • All documents to be uploaded to imeetcentral workspace. Email todd.irwin@ge.com for access • Additional comment/suggestions before November 15, 2022 to todd.irwin@ge.com • Next Meeting: TEAMS: Wednesday December 14, 2022: 10AM to Noon eastern • A motion was made by Keith Flowers to submit a request for PAR revision to change from Guide to Recommended Practice. The motion was seconded by John Webb and after discussion was approved by unanimous acclamation. The Chair will seek approval with the HVCB Subcommittee at the Oct 19, 2022 afternoon meeting. • If needed a 1 year PAR extension request may be made in 2023. • Continue to develop action plan to promote use of the RP with users and manufacturers <ul style="list-style-type: none"> ○ Resource center tutorial ○ Industry presentation (ex. Doble CB Seminar) ○ PES GM, T&D Expo, PCIC, etc
10	Adjourn
Meeting adjourned by the Chair at 9:19AM	

PC37.010 Working Group

Fall 2022, Burlington, VT

October 19, 2022

8:00AM – 9:45AM



Agenda

- Call Meeting to Order
- Introduction of Members & Guests, circulation of roster
- Review IEEE Patent and Copyright Policy slides
- Attendance and Quorum Check
- Agenda Review and Approval
- Approval of minutes of previous meetings (Spring 2022)
- PAR Status
- Review of draft
- Other Discussion/New Business
- Adjourn

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**

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

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>

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**

IEEE SA
STANDARDS
ASSOCIATION



IEEE SA COPYRIGHT POLICY

NOVEMBER 2019



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

- 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 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>

Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
 - [IEEE Code of Ethics](#)
 - [IEEE Code of Conduct](#)
- The core principles of the IEEE Codes of Ethics & Conduct are to:
 - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
 - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
 - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at <http://www.ieee.org/about/corporate/governance>

Participants in the IEEE-SA “*individual process*” shall act independently of others, including employers

- The [IEEE-SA Standards Board Bylaws](#) require that “*participants in the IEEE standards development individual process shall act based on their qualifications and experience*”
- This means participants:
 - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
 - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
 - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the “*individual process*”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that *“the standards development process shall not be dominated by any single interest category, individual, or organization”*
 - This means no participant may exercise *“authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints”* or *“to hinder the progress of the standards development activity”*
- This rule applies equally to those participating in a standards development project and to that project’s leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project’s IEEE-SA Program Manager

Attendance and Quorum Check

Members = 21

Quorum = 11

Role	First Name	Last Name
Chair	Neil	Hutchins
Secretary	Todd	Irwin
Member	John	Billings
Member	Michael	Crawford
Member	Patrick	Di Lillo
Member	Keith	Flowers
Member	Monty	Goulkhah
Member	John	Hall
Member	John	Harley
Member	Victor	Hermosillo
Member	Jennifer	Hunter
Member	Christopher	Jarnigan
Member	Thomas	Keels
Member	Albert	Livshitz
Member	Steven	May
Member	Dave	Mitchell
Member	Andrew	Peterson
Member	Jeff	Scott
Member	Michael	Skidmore
Member	Jeffrey	Ward
Member	John	Webb

PAR Status

- **Approved Dec 2020**
- **Expires Dec 31, 2024**
- **C37.10-2011 - Inactive**

- WG Review of draft

- Next Meeting TEAMS: Wednesday December 14, 2022: 10AM to Noon eastern
- submit suggestions before November 15, 2022 to todd.irwin@ge.com

- Adjourn

C37.10 Proposed PAR Revision

Title: Recommended Practice Guide for Investigation, Analysis and Reporting of ~~Power Circuit Breaker~~ Failures of AC High-Voltage Circuit Breakers and Circuit Switchers with Rated Maximum Voltage Above 1000 V

Scope: This Recommended Practice guide provides practices and processes to perform, analyze, and report failure investigations of ~~power~~ AC high voltage circuit breakers and circuit switchers.

C37.10 Proposed PAR Revision

Purpose: The purpose of this Recommended Practice guide is:

- a) to provide guidelines and promote ~~uniformity in the~~ uniform, thorough analysis of ~~power~~ circuit breaker and circuit switcher failures;
- b) to provide guidance for systematic and uniform data collection so that valuable evidence is not lost or destroyed;
- c) to provide a consistent methodology by which the most probable cause of any particular circuit breaker or circuit switcher failure may be determined, whether equipment or system issue;
- d) to encourage cooperative efforts by users and manufacturers during failure analysis;
- e) to provide guidance for reporting failures ~~for~~ of ~~power~~ circuit breakers and circuit switchers

C37.10 Proposed PAR Revision

Need for the Project: This project provides a recommended practice guide on the process of investigating circuit breaker and circuit switcher failures and will promote the consistency in the process

Stakeholders for the Standard: Owners and asset managers of high voltage (HV) circuit breakers and circuit switchers, Operators and maintainers of HV circuit breakers or circuit switchers, Power industry

PC37.10	Fall 2022	Attendance	Burlington, VT	19-Oct-22
Role	First Name	Last Name	Company	10/19/2022
Chair	Neil	Hutchins	Georgia Power	X
Secretary	Todd	Irwin	GE Grid Solutions	X
Member	John	Billings	retired	
Member	Michael	Crawford	Mitsubishi Electric	
Member	Patrick	Di Lillo	Consolidated Edison Co. of NY, Inc.	X
Member	Keith	Flowers	Siemens Industry, Inc.	X
Member	Monty	Goulkhah	Kinectrics Inc	
Member	John	Harley	FirstPower Group LLC	X
Member	Victor	Hermosillo	GE Grid Solutions	X
Member	Jennifer	Hunter	MEPPI	X
Member	Christopher	Jarnigan	Southern Company Services	X
Member	Thomas	Keels	kEElectric Engineering	
Member	Albert	Livshitz	CE Power Engineered Services	
Member	Steven	May	Southern Company	X
Member	Dave	Mitchell	Mitch and Associates	X
Member	Andrew	Peterson	ABB	
Member	Jeff	Scott	Ameren	X
Member	Michael	Skidmore	AEP	X
Member	Jeffrey	Ward	Doble Engineering Company	X
Member	John	Webb	ABB	X
Guest	Arben	Bufi	Meiden America Switchgear, Inc.	X
Guest	Leo	Lopez	WIKA Instrument, LP	X
Guest	Anthony	Ricciuti	Eaton Corporation	X
Guest	Carl	Schuetz	American Transmission Company (ATC)	X
Guest	Don	Steigerwalt	Duke Energy	X
Guest	Miklos	Orosz	Myers Power	X
Guest	Christo	Thomas	Schneider Electric	X
Guest	Jason	Cunningham	Southern States	X
Guest	Nadia	Hashaai	HASNAOUI	X
Guest	Terry	Hunter	Westinghouse Electric Company	X
Guest	Roberto	Olivares	Siemens	X
Guest	Jailin	Li	Hydro One	X
Guest	John	Deng	BC Hydro	X