

**Meeting Minutes**  
**Working Group PC37.06.1 Recommended Practice of Fast TRV for HVCB**  
**April 24, 2017 Charlotte, N.C.**

**Introduction of members and guests**

52 attendees present  
25 members  
27 guests

**Approval of minutes from Fall meeting (Pittsburg)**

Motion to approve the meeting minutes made by Anne Bosma  
Seconded by Xi Zhu

**Discussion**

1. PAR expires Dec. 2017, question by Chair do we need a PAR extension? Answer-Mid-October is the response date needed by IEEE for PAR extension
2. Chair discussed the voting results from the recirculation ballot.
3. A presentation was made by Denis Dufournet that reviewed TRV basics as some members made negative votes on the latest recirculation ballot.
4. The chair explained that this recommended practice is written for TLF duty (and has been from the beginning of the WG formation) although there are special applications that could be covered. However fast rising TRV applications different than a transformer should be considered special and careful inspection of the application is needed.
5. A proposed was made to include wording that gives guidance to the user that series reactor applications are explained in C37.011.
6. The WG agreed that a benefit from retitling the PAR is not needed, therefore this comment from recirculation ballot was rejected.
7. A presentation was made by Luke Collette and Carl Schuetz regarding series reactor applications and the impact of amplitude factors on TLF evaluation.
8. A proposal made, and accepted, to include modeling concerns for TLF application into C37.011.

**Next Steps for the document**

Incorporate changes accepted by the WG and chair in this meeting and send for publication.

**Action Items**

Reference to series reactor applications in C37.011 will be made in the Introduction.  
Inform C37.011 Study Group that content regarding TLF amplitude factors will be submitted.  
Chair to include presentations made during discussion in the delivery of the meeting minutes.

<b>First Name</b>	<b>Last Name</b>	<b>Company</b>	<b>Role</b>	<b>4/24/2017</b>
Mehmet	Adanur	Southern Company Services	Guest	
Roy	Alexander	RWA Engineering	Member	
Michael	Anderson	American Transmission Company	Guest	
Mauricio	Aristizabal	ABB	Member	XX
Ayers	Roy		Guest	X
William	Bane	Nashville Electric Service	Guest	
W.J. (Bill)	Bergman	PowerNex Associates Inc.	Member	
Stan	Billings	Mitsubishi Electric PP	Member	
Anne	Bosma	ABB AB	Member	XX
Cody	Brehm	American Transmission Company	Guest	
Steven	Brown	Allen & Hoshall	Guest	
John	Brunke	Dr. John H. Brunke, P.E.	Guest	
Arben	Bufi	HITACHI HVB, INC.	Member	XX
Richard	Burge	Southern States LLC	Guest	
Ed	Burt	BC Hydro	Guest	
Eldridge	Byron	Schneider Electric	Guest	
Michael	Cannady	Southern Company Services	Guest	
Donald	Cantrelle	Georgia Power	Guest	
Gilbert	Carmona	Southern California Edison	Guest	
Stephen	Cary	Eaton Corporation	Guest	
Steven	Chen	Chenhouse North America	Guest	
Chih	Chow	PEPCO	Member	XX
Michael	Christian	ABB	Guest	X
Dave	Collette	Mitsubishi Electric	Guest	
Lucas	Collette	Mitsubishi Electric Power Products	Member	XX
Michael	Crawford	Mitsubishi Electric	Guest	
Jason	Cunningham	HITACHI HVB, INC.	Guest	
Patrick	Di Lillo	Consolidated Edison Co. of NY, Inc.	Member	XX
Denis	Dufournet	Alstom Grid	Member	XX
John	Eastman	INCON	Guest	
Alexander	Ebbert	HICO America	Guest	
Doug	Edwards	Siemens Energy, Inc.	Guest	
Ken	Edwards	Bonneville Power Administration	Guest	

Robert	Foster	Megger	Guest
Sahadev	Gohil	AZZ/Central Electric Mfg. Co.	Guest
John	Hall	Tennessee Valley Authority	Guest
Daryl	Hallmark	Southern Company Services	Guest
Helmut	Heiermeier	ABB	Member XX
Charles	Hendrickson	Arizona Public Service Company	Guest
Victor	Hermosillo	Alstom Grid	Member
Luther	Holloman	Dominion	Guest
John	Horton	EPRI	Guest
Jingxuan (Joanne)	Hu	RBJ Engineering Corporation	Member
Todd	Irwin	Alstom Grid Inc	Guest X
Anton	Janssen	Liander	Guest
Cory	Johnson	BPA	Guest
Joseph	Jasinski	ITC Holdings	Guest
Dave	Johnson	Consultant	Guest
Byung-Kyue	Jun	Hyosung Corporation (HICO)	Guest
Aaron	Kalyuzhny	Israel Electric	Guest
Amir	Khosarvi	BC Hydro	Guest X
William	LaMantia	Mitsubishi Electric Power Products, Inc.	Guest
Stephen	Lambert	Shawnee Power Consulting, LLC	Guest
Matthew	Lawrence	Doble Engineering	Guest
David	Lemmerman	PECO/Exelon	Member
Paul	Leufkens	KEMA-Powertest	Guest
Hua Ying	Liu	Southern California Edison	Member XX
Albert	Livshitz	Schneider Electric Services	Guest
Bjorn	Lofgren	Siemens Energy	Guest
Russell	Long	Retired	Member
Antonio	Mannarino	PSE&G	Guest
Vincent	Marshall	Southern Company Services	Guest X
Ricardo	Martinez	CFE-LAPEM	Guest
Peter	Marzec		Guest X
John	Marzula	Mitsubishi	Guest
Deepak	Mazumdar	Central Electric Manufacturing Co.	Guest
Neil	McCord	Southern States	Guest

Peter	Meyer	S&C Electric Company	Guest	
Dave	Mitchell	Dominion	Guest	
Georges	Montillet	GFM Consulting LLC	Guest	
Raj	Nayar	Siemens Energy Inc.	Guest	
Jeffrey	Nelson	Tennessee Valley Authority	Guest	
T	Olsen	Siemens Industry, Inc.	Guest	
Miklos	Orosz	Schneider Electric NAOD/Square D Co	Guest	
Mirko	Palazzo	ABB	Guest	
Amit	Patel	GE	Guest	
Shawn	Patterson	US Bureau of Reclamation	Guest	
Thomas	Pellerito	Detroit Edison	Guest	X
Lise	Phan	Parcific Gas and Electric Company	Guest	
Cornelius	Plath	Omicron electronics	Guest	
Reynaldo	Ramos	Southern Company	Guest	
Francis	Ricard	FirstPower Group LLC	Guest	
Anthony	Ricciuti	Eaton Corporation	Guest	X
Jon	Rogers	Siemens Energy, Inc	Guest	
Roderick	Sauls	Southern Company Services	Member	
Rahman	Syed	The United Illuminating Co	Guest	X
Carl	Schuetz	American Transmission Company (ATC)	Member	XX
Jon	Schumann	ATC	Guest	X
Devki	Sharma	Consultant	Member	
Harish	Sharma	Southern Company Services	Member	XX
Sushil	Shinde	ABB Inc.	Chair	X
John	Shullaw	GE Energy - Industrial Solutions	Guest	
Dean	Sigmon	Eaton Corporation	Guest	
Michael	Skidmore	AEP	Member	XX
Robert	Smith	Eaton Corporation	Guest	
Zachary	Smith	Mitsubishi Electric Power Products, Inc.	Guest	
Don	Steigerwalt	Duke Energy	Guest	
Henk	te Paske	KEMA Netherlands	Guest	X
John	Toney	GE	Guest	
Vernon	Toups	Siemens	Guest	X
Stephen	Tyler	Dominion	Guest	

James	van de Ligt	CANA High Voltage Ltd.	Guest	X
Steve	Vatterott	ABB Inc.	Guest	
Jan	Veisker	Siemens AG	Member	XX
Wes	Wadsworth	Hitachi HVB, Inc.	Guest	
Keith	Wallace	Southern Company	Guest	
John	Webb	ABB	Guest	
Jerry	Wen	BC Hydro	Guest	
Richard	York	MEPPI	Member	XX
Jiong	Zhang	MEPPI	Guest	
Xi	Zhu	GE Energy	Member	XX
Sandeep	Zope	Powell Electrical Systems Inc.	Guest	
John	Eastman	INCON	Guest	
Jeff	Brogdon	Georgia Transmission Corp.	Guest	X
Mike	Lafond	Genereal Electric	Guest	
Casey	Weeks	Siemens Energy	Guest	
Ahmed	Shahab	Siemens Energy	Guest	
Jeremy	Hensberger	MEPPI	Guest	
Aasim	Atiq	Siemens Energy	Guest	
Timothy Shane	McGee	Siemens Energy	Guest	
Berme	Dwier	PECO/Exelon	Guest	
Jean-Marc	Torres	Eaton Corporation	Guest	
Wei	Zhang	HITACHI HVB, INC.	Guest	X
Art	Jur	Eaton Corporation	Guest	
Kavin	Rogerson	Eversource	Guest	
Thomas	Kohhler	Ameren	Guest	
Frank	Mayle	TechniBus Inc	Guest	X
David	Cauerly	Trench Limited	Guest	
Jean-Marc	Torres	Horseheads NY	Guest	
Jeremy	Hensberger	MEPPI	Guest	
Roy Neil	Hutchins	Southern Company Services	Guest	
Fennell	Howard	Nashville Electric Service	Guest	X
Anil	Dhowan	Comed	Guest	
Andrew	Peterson	ABB Inc.	Guest	
Joe	Browning	FirstPower Group LLC	Guest	

Jeff	Brogdon	Georgia Transmission Corp.	Guest	
Dan	Schiffbauer	Toshiba	Member	XX
Scott	Lanning	S&C Electric Company	Guest	X
Anton	Poeltl	ABB Inc.	Guest	
Joe	Kausek	FirstPower Group LLC	Guest	
Oscar	Montana	Salt River Project	Guest	
Frank	Mayle		Guest	
Kim	Jinho		Guest	
Jim	McBride		Guest	
Jeffrey	Britton		Guest	
Neil	Hutchins		Guest	X
Ted	Burse	Powell Ind	Guest	
Santosh	Reddy	Powell Ind	Guest	
Alexander	Hoover	Siemens	Guest	X
Robert	Warren	KEMA Laboratories	Guest	
Alan	Peterson	Utility Services Corp	Guest	
Jason	Cunningham	Hitachi T&D Solutions	Guest	
Bobby	Rich	Dominion	Guest	X
Dragan	Tabakovic	Meramec	Guest	X
Jeffrey	Ward	Doble Engineering	Guest	X
Michael	Colesami		Guest	X
John	Pnovminh	PEPCO	Guest	X
John	Easxman		Guest	X
Mike	Lafund	GE	Guest	X
Matt	Westerdale	US Bureau of Reclamation	Guest	X
Erin	Spiewak	IEEE	Guest	X
Nicholes	Orlando		Guest	X
Brandon	Kim	HICO America	Guest	X
Vincent	Chiodo	HICO America	Guest	X
Curtiss	Frazier	Ameren	Guest	X