C37.04a WG Spring Meeting, Clearwater, FL

4/18/2023

Chair: John Webb

Secretary: Marcus Young

Meeting Schedule: 10:15am – 12:00pm

Quorum: Quorum reached (26 of 32 members present)

Minutes:

- Introductions of members and guests with affiliations including Quorum count. A quorum was present
- Approval of agenda: Motion made by Jan Weisker. Approved by unanimous consent
- Review of Patent Slides and call for essential Patent Claims: None
- Review of IEEE Copyright Policy slides
- Chair reviewed requirements to gain and maintain voting membership.
- Chair reminded attendees that the WG uses iMeetCentral as document repository. Attendees must request access from the Chair or Secretary.
- PAR items: Chair provided an overview of PAR items and PAR expiration of Dec. 2025, indicated that he believed timeline still achievable.
- (73) WG reviewed technical changes in C37.04 already agreed to:
 - WG confirmed prior decision that "light" pollution was the level for "Usual" service conditions.
 - Service Capability: WG discussed the possibility of including a description in C37.04 of what is in C37.09. This will provide the user guidance and thought process.
 - TRV T60 curves: Chair of WG PC37.016 indicated that the revision of that that standard would likely reference C37.04 for TRV levels. Chair reported that recent CD for IEC 62271-100 made some minor adjustments to its TRV tables and WG may wish to consider updates to C37.04; Chair to investigate and make proposal at next meeting.
 Coordination with C37.11:
 - WG discussed electrical/manual closing requirements in C37.04 and if they should be changed considering language from C37.11.
 - WG members noted that an electrical close requirement is needed for commissioning due to safety concerns and Carl Schuetz will make a proposal to send to WG.
 - WG reviewed the previous decision to restore the 15 sec stored energy recharge requirement which was previously in C37.04 but omitted from Table 25 of 2018 revision. It was observed that the 15 sec requirement only becomes necessary for circuit breakers rated for rapid reclosing, otherwise the standard duty cycle could be met with a 3 minute spring discharge. contradicts C37.04-1999 mentioning of 3 minutes. No member of WG made a motion to reverse the prior decision to restore the 15 sec. max. recharge time for circuit breakers only capable of one CO with a fully charged stored energy system.

- WG members noted that IEC 62271-100 states that alternate values for 15 sec or 1 minute can be used and this is sufficient justification for restoring the 15 sec. recharge requirement.
- Decision was made to add back the 15 secthen add a list that includes 3 min, 1 min as alternatives.
- Virtual meeting will be scheduled to address remaining agenda items.
- Carl Schuetz Motioned to adjourn the meeting, Chris Jarnigan 2nd.
- Meeting adjourned

Reported by Marcus Young, Secretary

Attachment: WG Meeting Attendance and Affiliations

Role	First Name	Last Name	Company Name	4/12/2022	8/24/2022	: 10/18/2022	4/18/2023	Last 4	Comments
Chair	John	Webb	ABB	Х	Х	Х	Х	4	
Secretary	Marcus	Young	Mitsubishi Electric	X	X	X	X	4	
VM	Arben	Bufi	Meiden America Switchgear, Inc.	X	Х	Х	Х	4	
VM VM	Eldridge	Byron	Schneider Electric 2 Phase Power	X X	Х		Х	1 3	
VM	Stephen	Cary	Eaton Corporation	X	X	Х	X	3 4	
VM	Steven Andrew	Chen Chovanec	Power Grid Components	X	X	X	X	4	
VM	Michael	Christian	ABB	X	X	X	X	4	
VM	Lucas	Collette	Duquesne Light Co.	X	X	X	X	4	
VM	Sergio	Flores	Schneider Electric US, Inc.	X	X	X	X	4	
VM	Robert	Hanna	JST Power Equipment	X	X	X	~	3	
VM	Jeremy	Hensberger	Mitsubishi Electric	X	X	X	Х	4	
VM	Christopher	Jarnigan	Southern Company Services	X	X	X	X	4	
VM	Thomas	Keels	kEElectric Engineering, PLLC	X	~	X	~	2	
VM	Carl	Kurinko	Hitachi Energy	X		X		2	
VM	Chang Hoon	Lee	HYOSUNG	X	Х	X	Х	4	
VM	Vincent	Marshall	Southern Company	X	Λ	X	X	3	
VM	Neil	McCord	KEC Precision LLC	X		X	X	3	
VM	Craig	Polchinski	Mitsubishi Electric Power Products,	X	Х	~	~	2	
VM	Anthony	Ricciuti	EATON	X	~	Х	Х	3	
VM	Victor	Savulyak	KEMA	X		X	~	2	
VM	Daniel	Schiffbauer	Toshiba International Corporation	X		X	Х	3	
VM	Carl	Schuetz	ATC	Х	Х	Х	Х	4	
VM	Jeffrey	Scott	Ameren	X		X	Х	3	
VM	Michael	Skidmore	AEP	Х	Х	Х	Х	4	
VM	Donald	Steigerwalt	Duke Energy	Х		Х	Х	3	
VM	Vernon	Toups	Siemens Energy Inc	Х	Х	Х	Х	4	
VM	Jeff	Ward	Doble Engineering Company	Х	Х	Х	Х	4	
VM	Casey	Weeks	Siemens Energy, Inc.	Х		Х	Х	3	
VM	Jan	Weisker	Siemens Energy	Х		Х	Х	3	
VM	Terry	Woodyard	Siemens Industry, Inc.	Х	Х	Х	Х	4	
VM	Samuel	Zaharko	Mitsubishi Electric	Х	Х	Х	Х	4	
NVM	Anatoly	Akhunov	HICO America				Х	1	
NVM	Samuel	Andris	KEMA Labs			Х	Х	2	
NVM	Mauricio	Aristizabal	Hitachi Energy			Х	Х	2	Requested Membership
NVM	Koustubh	Ashtekar	JST POWER EQUIPMENT			Х	Х	2	Requested Membership
NVM	Ganesh	Balasubrama	Eaton				Х	1	Requested Membership
NVM	Harm	Bannink	G&W Electric	Х	Х	Х	Х	4	
NVM	Paul	Barnhart	UL, LLC	Х	Х			2	
NVM	Alexander	Bartels	Powell Industries				Х	1	
NVM	Andrew	Beckel	XCEL Energy				Х	1	
NVM	George	Becker	Power Engineers Inc.			Х	Х	2	
NVM	Robert	Behl	JST Power Equipment				Х	1	
NVM	Sanket	Bolar	Oncor				Х	1	
NVM	Christopher	Borck	Eaton	Х				1	
NVM	Adam	Brooks	Duke Energy				Х	1	
NVM	John	Brunke	Power Engineers	Х				1	
NVM	Craig	Bryant	Duke Energy			Х	Х	2	Requested Membership
NVM	Ngoc	Bui	San Diego Gas & Electric	Х				1	
NVM	Dave	Collette	Mitsubishi Electric				Х	1	
NVM	Michael	Crawford	Mitsubishi Electric	X		Х	Х	3	
NVM	Jason	Cunningham	Southern States, LLC	Х		Х	Х	3	
NVM	John	Deng	BC Hydro			Х		1	
NVM	Patrick	Di Lillo	Consolidated Edison Co. of New	Х	Х	X	X	4	
NVM	Federico	Di Michele	CESI SPA			Х	Х	2	Requested Membership

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NVM	Boubacar	Diallo	Southern States LLC			Х		1	
NVM	Maxwell	Eastman	Black and Veatch				Х	1	
NVM	Bruce	Fennell	Nashville Electric Service	Х				1	
NVM	Kaylor	Garcia	Utility Solutions, Inc.				Х	1	
NVM	Nadia	Hasnaoui	General Electric			X		1	
NVM	Christian	Heinrich	Siemens AG			X		1	
NVM	Victor	Hermosillo	General Eletric			X	V	1	
NVM	Jennifer	Hunter	Mitsubishi Electric	V	V	X	Х	2	Requested Membership
NVM	Roy Todd	Hutchins	Georgia Power Company GE Grid Solutions	X X	X	X X	Х	3	
NVM		Irwin	Southern States LLC	X	X X	X	X	4	
NVM	Bharatwaj	Jagadeesan		X	X	Х		2	
NVM	Darin	Jensen	Medien America Switchgear			X	v		
NVM	David	Johnson	HVCB Consulting			V	Х	1	
NVM	Hyoung Jin	Joo	Hyundai Electric	V	v	Х		1	
NVM	John	Kelly	USBR	Х	Х		v	2	Deguasted Mambarship
NVM	KyungKyu	Kim	HICO America			V	Х	1	Requested Membership
NVM	Songtae	Kim	HICO America			Х	V	1	
NVM	Yun Seong	Kim	KERI				X	1	
NVM	Vladmir	Kirienko	Tavrida Electric				Х	1	
NVM	Brad	Leccia	Eaton			Х	Х	2	Requested Membership
NVM	Yong Woo	Lee	KERI				Х	1	
NVM	Adrian	Lopez	Powell Industries			Х		1	
NVM	Leo	Lopez	WIKA Instrument Corporation	Х		Х	Х	3	
NVM	Josh	Lustig	Black and Veatch				Х	1	
NVM	Peter	Marzec	S&C Electric	X	Х			2	
NVM	Paul	Masterson	Meiden America Switchgear	Х		Х	Х	3	
NVM	Steven	May	Southern Company			Х	Х	2	Requested membership
NVM	Aaron	McReson	Meiden			Х		1	
NVM	David	Mitchell	Mitch & Associates	X		Х	Х	3	
NVM	Anthony	Natale	HICO America	Х			Х	2	
NVM	Raj	Nayar	Siemens	Х			Х	2	
NVM	Fernando	Ordein	Dominion Energy				Х	1	Requested Membership
NVM	Miklos	Orosz	Circuit Breaker Technology &			Х		1	
NVM	Sumitabha	Pal	Schneider Electric	Х	Х	Х	Х	4	
NVM	Lalit	Patil	Eaton				X	1	
NVM	Damian	Perrin	Entergy Services, LLC.			Х	Х	2	
NVM	Mark	Peterson	XCEL Energy				Х	1	
NVM	Anthony	Pounders	Meiden America Switchgear, Inc.				Х	1	
NVM	Laxminarayan	Raja	University of Texas	V		V	Х	1	
NVM	Rakesh	Ranjan	Esgee Technologies Inc.	Х		Х	v	2	Deguasted Marsharshin
NVM	Aaron	Rexroad	Meiden America Switchgear, Inc.	V			Х	1	Requested Membership
NVM	Jeffery	Ricker	SCHNEIDER ELECTRIC	Х			V	1	
NVM	Brian	Roberts	Southern States				X	1	
NVM	Jon	Rogers	Siemens Energy				X	1	
NVM	Oscar	Salas	Duke Energy				X	1	
NVM	Alex	Salinas	Doble/Vanguard	v	v		X	1	Doguostod Marshaushin
NVM	Leonel	Santos	Schneider Electric	Х	Х		X	3	Requested Membership
NVM	Ben	Sax	Nashville Electric Service	v			Х	1	
NVM	Carl	Schneider	Schneider Electric	Х			v	1	Doguostod Marshauth
NVM	Oleksandr	Sergeyenko	Tavrida Electric North America Inc				X	1	Requested Membership
NVM	Devki	Sharma	Retired	Х			X	2	
NVM	Hall	Sigmon	Siemens Industry, Inc.				Х	1	
NVM	Kirk	Smith	Retired			X		1	
NVM	Lokesh	Solanki	ABB			Х	, <i>.</i>	1	
NVM	Tim	Tillery	HOWARD INDUSTRIES	Х			Х	2	

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NVM	Joseph	Usner	AEP	Х	Х	Х	Х	4	
NVM	Jacob	Walgenbach	Siemens			Х	Х	2	
NVM	Matt	Westerdale	Bureau of Reclamation				Х	1	
NVM	Daniel	Wolfe	Mitsubishi Electric			Х	Х	2	
NVM	Richard	York	Mitsubishi Electric	Х		Х	Х	3	Requested Membership
NVM	Mina	Youssef	Eaton			Х		1	
NVM	Lukas	Zehnder	Hitachi Energy Switzerland Ltd.	Х				1	
NVM	Xin	Zhou	Eaton			Х		1	
	32 Members			61	31	69	84		Total Attendees
							26		Voting Members