Minutes WG PC37.11
Electrical Controls for High Voltage Circuit Breakers
Tuesday, April 27, 2010
10:15 - 12:00
Myrtle Beach, SC

I. Welcome

II. Review of Patent Slides

III. Introductions

IV. Minutes from Denver meeting were reviewed and approved.

V. Old Business

a. Draft 1 of the standard was circulated amongst the working group members for comments prior to the meeting.

b. Discussed the necessity of defining the term “valid signal” in Clause 3. Comments of the working group identified the need for this definition because of electronic controls as well as discrete component circuits need a valid signal from the utility control system to correctly function. There is no known standard that documents current utility application for relay output from modern microprocessor, solid state, or electromechanical. Historically, this has not been an issue. However, with new electronic being used in control circuits, signal requirements are becoming a more important point of interface which the utility and manufacture must coordinate. The direction of the working group tended toward adding a statement that would prompt a discussion between the user and the manufacturer to coordinate this topic and identify the validity of a signal is based on voltage, current, duration, and quality of signal. Barnett will investigate common utility practice to see if there is any standardization of the current applications.

c. Discussed removing reference to C37.90.1, C37.90.2, and C37.90.3 for electromagnetic compatibility of electronic components and adding a reference to C37.100.1. Webb will recommend change prior to next meeting.

d. Discussed adding a requirement for the user to provide an electrostatic and electromagnetic shielded cable connection to the circuit breaker. This would help limit the voltage rise on relays internal the circuit breaker. General consensus of the users was that there is no consensus as to the application of this, and a requirement such as this is out of scope of the document. A note will be added to flag the user to consider grounding of the cables to limit transients voltage on the control wiring which might damage relays.

e. Discussed the changes to requirements “f” and “g” of Clause 3 so that requirement “f” would be for control and alarm circuits for stored energy failure and requirement “g” would be for dielectric failure.

f. Discussed the figures including adding a note to the figure for capacitive trip devices to better identify their distinctness from devices that use energy stored in the electrostatic field of a capacitor for operation of the mechanism.

g. Discussed the need for a new figure for breakers that utilize energy stored in a capacitor for operation of the mechanism, or for breakers with a mostly electronic control circuit. Webb will review figures and recommend changes.

h. Briefly the auxiliary switches for “a” and “b” fingers included standardize rating for current breaking and the definition of “b” fingers. This item needs to be discussed in more detail at a future meeting or via email.

VI. New Business

a. Discussed adding a requirement for manufacturers to use UL devices in the control circuits. Comments in the working group pointed out that control devices are sometimes applied outside their UL rating, but are adequately tested during development. Working group voted not to require UL ratings on devices inside the control circuits.

VII. Adjourn

Note for future meeting: WG Chair received a comment after the meeting which working group should consider at a future meeting including the BCT requirements of SG-6 in the standard. This topic will be discussed at the Las Vegas meeting in September, 2010.

16 member

21 guest

Name	Company	Email	WG Member
Roy Alexander	PPL EU	r.alexander@ieee.org	G
Mauricio Aristizabal	Pennsylvania Breaker	m.aristizabal@ieee.org	M
Paul Barnett	Tennessee Valley Authority	rpbarnett@ieee.org	M
Bill Bergman	PowerNex Associates Inc.	bergman@ieee.org	M
Stan Billings	Mitsubishi Electric PP	s.billings@ieee.org	M
Arben Bufi	HVB AE Power Systems, Inc.	benb@hvbi.com	M
Gilbert Carmona	Southern California Edison	gilbert.carmona@sce.com	G
Steven Chen	Eaton Corporation	stevenzchen@eaton.com	M
Chih Chow	PEPCO	ccchow@pepco.com	G
Mike Crawford	Mitsubishi Electric	michaelfcrawford@ieee.org	M
Pat Di Lillo	Consolidated Edison Company of NY, Inc.	dililop@coned.com	M
Shane Ford	Nashville Electric Service	sford@nespower.com	G
Dave Galicia	Ameren	dgalicia@ameren.com	M
Rick Gavazza	Pacific Gas & Electric	r.gavazza@ieee.org	G
Hua Liu	Southern California Edison	liuhy@ieee.org	M
Li Liu	Eaton	liliu2@eaton.com	G
Inna Liu	Zhejiang Titan Composite	inna@zjtitan.com	G
Bjorn Lofgren	Siemens Energy	bjorn.lofgren@siemens.com	G
Vincent Marshall	Georgia Power	vamarsha@southernco.com	G
Neil McCord	Southern States	neil.mccord@ieee.org	G
Pete Meyer	S&C Electric Company	pmeyer@sandc.com	G
Georges Montillet	GFM Consulting LLC	montillet@verizon.net	G
Stephanie Montoya	Southern California Edison	stephanie.montoya@sce.com	G
Jeff Nelson	Tennessee Valley Authority	jeffnelson@ieee.org	G
Tom Pellerito	Detroit Edison	pelleritot@dteenergy.com	G
Frank Ricard	FirstPower Group LLC	frank.ricard@firstpowergroupllc.com	G
Tony Ricciuti	Eaton Corporation	tricciuti@ieee.org	M
Jon Rogers	Siemens	jon.rogers@siemens.com	G
Devki Sharma	Consultant	devkisharma@ieee.org	G
Sushil Shinde	ABB Inc.	sushil.shinde@us.abb.com	G
Mike Skidmore	AEP	mlskidmore@aep.com	M
Hongbiao Song	Bechtel	hsong@bechtel.com	G
Alan Storms	Storms Advisory Services	a.d.storms@ieee.org	G

John Toney	GE	john.toney@ge.com	M
John C. Webb	ABB	jcwebb@ieee.org	M
John Zhang	MEPPI	jiong.zhang@meppi.com	M
Sean Zhu	HICO America	xi.zhu@ieee.org	M