

Meeting Minutes
WG 824: Series Capacitor Working Group
of the
Transmission and Distribution Committee
Orlando, Florida
9-10 January 2007

Date: January 9-10, 2007, 08:00-11:00AM

Place: Wyndam Orlando Resort, Orlando, Florida

1. Introduction

Bruce English, Chair of working group, called the meeting to order.

The following people were in attendance:

Name	Company	Member/Guest
Matthew Ceglia	IEEE	G
Mike Cullum	Power Engineers	G
Bruce English	GE	M
John Joyce	Siemens PT&D	M
Carlet Langford	Nevada Power Co.	M
Lauri Latipaa	Nokian Capacitors	M
Per Lindberg	ABB	M
Mark McVey	Dominion VA Power	M
Om Nayak	Nayak Corp.	M
R. Vittal Rebbapragada	PG&E	M
Bob Rush		G
Rao Thallum	SRP	M
Austin Tingley	Power Engineers	M
Duane Torgerson	Winfield Enterprise	M
Susan Vogel	IEEE	G

2. Previous Meeting Minutes

The minutes from the June 21, 2006 Montreal meeting were approved as submitted.

3. Additional Agenda Items

Website with most-current documents and document history: <http://grouper.ieee.org/groups/td/cap/seriescap/>

4. PSRC Guide (C37.116) Document Discussion

Matthew Ceglia and Jennifer Vogel from IEEE AdCom present at the meeting and joined discussion. Comment response in new automated system has replaced traditional "personal" approach to negative comment resolution procedures. RevCom does not look at technical issues or scope infringement issues, only at procedural issues, but may be alerted to safety and legal issues if they are expressed in the right way. If appeal from T&D committee to PSRC is unsuccessful, we should be ready to follow up with a request for an amendment PAR, to

(at a minimum) correct portions of the document. Tech council appeal is still possible, but timing may be an issue.

Mark McVey agreed to draft a letter to Matt Ceglia as a formal request for technical review, emphasizing the safety aspects of current objections to document. Sue Vogel encouraged us to appeal directly to the IEEE Standards Board.

5. Draft Guide for the Specification of Fixed Series Capacitor Banks for Transmission Systems

Section 12.5 and B.9 of document would be a good place to put in a disagreement (a more-balanced analysis) with the C37.116 low-current MOV test section.

Discussion on the total number of pages and main/annex split of pages from a "target" standpoint. Suggested $33+67=100$ as a goal, but this document may become significantly larger by the end.

Document focus discussed: should be focused on utility engineer's needs. Need to make sure document is not used in lieu of IEEE 824 and that 824 should be used in conjunction with this document. However, it would be less-useful if we simply write "in accordance with IEEE 824" everywhere. Need to try to find balance.

Presentation by Om Nayak and Vitall Rebbapragada on bypass switch closing duty comparison between MOV-only (gapless) protection and thyristor protection.

TRV for line breaker discussion and bypass speed of bypass switch, thyristor, and/or TAG compared. Damping also important. Reinsertion transients, block reinsertion logic for controller, and bypass switch TRV requirements discussed. 3-ph versus 1-ph operation discussed.

External disconnecting switches discussed, especially the external bypass disconnect switch (#9 of Figure 1 of current document) and its insertion duties for high line currents. Limiting duty can be accomplished by operational constraints or moving reactor in series with capacitors, or more-expensive switch may be applied. Need to consider that simpler switch in these locations may require less maintenance and maintenance on these switches requires line outage (juggling act).

Reactor magnetic clearances and harmonic current effects on reactor and fuse ratings discussed.

Balance of plant section discussed in sidebar with Vitall Rebbapragada. Sections to include: control house, FO signal column, FO cable, control cables, trenching, line drops, connectors, and buswork and power cabling.

Section 9.8 and Appendix B portion dedicated to external disconnect switches assigned to Carlet Langford and Rao Thallum.

Bruce English will organize phone conferences, tentatively ~8:00-9:00 Pacific coast time, using WebEx technology once per month, to last exactly an hour and no more, focusing on a specific portion of the document. Try to get more participation from others who cannot travel for WG meetings and also use as opportunity to include younger engineers to develop the next generation of WG members.

6. Old Business

7. New Business

Summer meeting scheduled for June 25-27, 2007 in Tampa, Florida.
Winter meeting tentatively January 2008 in San Antonio, Texas.

8. Meeting Adjourned

Respectfully submitted,
Bruce English
January 10, 2007