

**Capacitor Subcommittee  
of the  
Transmission and Distribution Committee  
2016 IEEE PES General Meeting Committee Minutes  
Boston, MA**

**Wednesday, July 20th, 2016**

## **I. Introduction**

The meeting was called to order by the Subcommittee Chairman Richard Sévigny.

Attendees introduced themselves. The following 15 people were in attendance:

<b><u>Name</u></b>	<b><u>Company</u></b>	<b><u>Member or Guest</u></b>
Bill Chai	GE - CPQP	Member
Biswajit Singh	ABB Inc.	Member
Frédéric St-Hilaire	Hydro-Québec	Secretary
Frederich Constance*	National Grid	Guest
Jan Paramalingam	Mitsubishi Electric	Member
Joe Meisner	American Electric Power	Member
Marc McVey	Dominion	Member
Mike Hulse	Bonneville Power	Vice Chairman
Paul Marken	GE Grid Solutions	Member
Richard Sévigny	Hydro-Québec	Chairman
Roy Alexander	RWA Engineering LLC	Member
Sarah Newton	American Transmission Company	Member
Steve Ashmore	QVARx Inc.	Guest
Tom Grebe	EnerNex	Webmaster
Vincent Deslauriers	ABB Inc.	Member

\* New Member or Guest, Welcome!

## **II. Previous Meeting Minutes**

The minutes from the January 2016 Memphis JTCM were reviewed. Minutes were unanimously approved as submitted by a motion from Marc McVey that was seconded by Bill Chai.

## **III. Membership Review**

The membership roster was sent around for review and correction. The updated roster have 20 new observers and 4 new active members. This subcommittee is open to new members and guests.

- Membership roster can be found at: <http://grouper.ieee.org/groups/td/cap/>

## **IV. Chairman's Report**

There is currently a problem with the meetings schedules, the different WG cannot use Monday morning anymore. For this meeting, on many occasions, time compressions were performed on timeslots for the meetings. Will need to be imaginative on how to add time to some WG during those 3 days. For example, some meetings require more time because they are catching up on the workload. Will consider concurrent meetings in some cases. On the JTCM meetings it would be still possible to use the Monday morning but for the GM it's not possible anymore. It seems acceptable to start at 11h00 AM or noon in order to create 2 to 3 sessions in the afternoon. One limiting factor is that the T&D administrative meeting is always on Thursday morning. Using Sunday is considered. Chairman calls for Sunday volunteers for the next subcommittee meetings. Spending more time on Monday afternoon is also considered. A panel session is also considered in order to get extra people interested in the subcommittee but it require significant efforts. Finally, a combination of all propositions is considered in order to generate the maximum benefits for all meetings. Chairman will provide a new agenda early to the WG chairs in order to have time to discuss the subject. The JTCM meetings are going to alternate between 3 different and fixed locations. It will alternate between "New Orleans LA", "Jacksonville FL", "Anaheim CA". The PES hopes to save money by choosing some recurrent venues for the meetings. Tomas Grebe has been nominated Editorial Board Member of the PES. The subcommittee has received a request for information a little while ago on how many series banks are installed, it will be addressed during the next meeting.

## **V. Liaison Reports**

### **A. NEMA – Bill Chai**

The NEMA general manager was present during the Subcommittee Meeting. The NEMA annual meeting was held in Columbia, SC in May. The group discussed and prepared a response to the IEEE test proposal.

### **B. IEC, CIGRÉ**

#### **IEC – Bill Chai**

Received the information about the upcoming. TC33 is a technical committee on capacitors. Next meeting is scheduled for November in London UK. Members are encouraged to participate in the American/Canadian delegation, please contact Bill Chai if interested. The chairman is already part of the Canadian delegation, all IEC documentation is available to the delegation members. The preliminary agenda doesn't mention the capacitor banks subject. It seems clear that IEC is interested in the IEEE Std. 1036. IEC previously requested that the IEEE standard becomes an IEC document. The chairman is clearly against the proposition of IEC.

### **CIGRÉ – Paul Marken**

Cigré is currently looking at overcompensated lines. Different models and simulations are being analysed and results are looking good so far. Been trying to understand the behavior and problems resulting of an overcompensated line. The group have been under pressure to deliver promptly the revised document.

### **C. Working Group on Capacitor Technical Papers – Tom Grebe**

From July 1<sup>st</sup> 2015 to June 30<sup>th</sup> 2016, 5 papers reviewed. 1 paper rejected, 1 paper revised and resubmitted, 3 accepted.

### **D. Working Group on Capacitor Bibliography – Richard Sévigny**

Have not received any demand or suggestions from members, no change.

### **E. Working Group on Guide for Application and Specification of Harmonic Filters - Jan Paramalingam**

The WG met on the 20<sup>th</sup> with 15 members and 8 guests. Email with the draft standard with a comment sheet have been sent to everyone. Comments are requested before November 30<sup>th</sup> in order to have the time to aggregate all of them in one document. Next meeting will require a timeslot of 4 hours.

### **F. Working group on Shunt Capacitors – Paul Marken**

The WG met on the 19<sup>th</sup> with 14 members and 12 guests. Good discussions by the NEMA folks around the review of the proposed type tests with no resolution around the discharge test that was proposed. The group still have time to decide what to do because the par have just been opened.

### **G. Task force on LV Shunt Capacitors – Steve Ashmore replacing Peter Goldstrass for this meeting**

The TF met on the 20<sup>th</sup> with 13 members and 3 guests. Made a brief review of the list of available standards that are applied out there for the manufacture of LV banks. IEEE Std. 18 covers LV units and testing. IEEE Std. 1531 have a good coverage of LV tuned banks for filters and equipment design and applications. The hole (lacking coverage) seems to be application considerations of non-filtered or un-tuned LV banks. Discussed about incorporating the material to the existing IEEE Std. 18 and 1531 and not the creation of a new standard. The attending members do not seem to have the required expertise for this TF. Need to generate interest from consulting and manufacturing that may have that expertise and ask them to come and participate in the TF. Need to review available material from CSA, IEC and UL. Requested that the members who are doing the liaison to those groups gather any relevant material for next meeting.

### **H. Working Group on Series Capacitor – Marc McVey**

The WG met on the 18<sup>th</sup> with 14 members and 4 guests. The group went thru IEEE Std. 824. Outlined the timeline needed to respond. Covered some of the material and discussed the changes the members want to make. Discussed the test that some members want to add.

Manufacturer will take the time to analyse and respond to those suggestions. All the documents will be merged for next meeting to be able to review all the submissions. The intent is that after the summer meeting 2017 the standard 824 would start balloting. Need to verify when IEEE Std. 1726 needs to be revised in order to decide when the group will start the revision. Like the substation SVC group, the WG will put together a collection all the application for the series capacitor to build a master list. Will identify how many applications exist in the world and how old they are. Will look at failure mechanism in order to help users with their specifications and with the understanding of where most of the problems are.

#### **I. Working Group on the Application Guide for Shunt Power Capacitors – Joe Meisner**

The WG met on the 19<sup>th</sup> with 20 members and 5 guests. Balloting should take 4 months. Requested that the surge arresters portion be reviewed within a month in order to have an idea on the changes required. Document was sent to everybody in order to get technical comments and it will be possible to request a discussion over WebEx with the WG chair to talk about the changes if needed before the next meeting. The review of the suggestions and comments will be done during the January meeting.

#### **J. Task Force on Capacitor Geomagnetic Disturbances (GMD) Mitigation – Marc McVey**

The TF met on the 19<sup>th</sup> with 15 members and 9 guests. Submitted scope of the draft, decided toward which direction the next paper is heading. EPRI offered to provide public information on previous work done on neutral blocking devices. The task force will make sure not to duplicate the efforts. The TF will innovate from an application stand point on the existing work data provided by EPRI.

#### **K. Task Force on Capacitor Discharge Limitation Application Paper – Roy Alexander**

The TF met on the 20<sup>th</sup> with 17 members and 3 guests. Watched a presentation on the research done on capacitor discharge tests. Discussed the suggested changes to IEEE Std. 18 and also a substitute for a graph in IEEE Std. 1036. More discharge tests are needed. Need to decide which parts of the research will be published. It could be a transaction paper or a technical report. More discussions will be done by correspondence in order to have something to review as a group in January. Next meeting would probably require 2 hours.

## **VI. Old Business**

Tom Grebe is continuing to maintain the website. The subcommittee website can be found at: <http://grouper.ieee.org/groups/td/cap/>

## **VII. New Business**

Frédéric St-Hilaire, the secretary of the subcommittee, will take a 1 year sabbatical from his job in January 2017. The minutes and membership rooster will be done by Tom Grebe temporarily.

At the 2016 IEEE PES Switchgear Committee Meeting in Hilton Head, South Carolina, the Transient Limiting Inductor Applications in Shunt Capacitor Banks technical report was awarded

the IEEE PES Technical Committee Prize Paper Award presented to Roy Alexander, Lucas Collette, Tom Grebe, Halim Malaj, and Joe Meisner by the Switchgear Committee of the IEEE Power and Energy Society. An award section will be created on the website.

### **VIII. Future Meetings**

- January 8-12 2017, PES JTCM, New Orleans, LA, USA
- July 16-20 2017, PES GM, Chicago, IL, USA

Minutes prepared by Frédéric St-Hilaire.