

Capacitor Subcommittee
of the
IEEE PES Transmission and Distribution Committee
2019 IEEE PES General Meeting Agenda
Atlanta, Georgia

Wednesday, August 7, 2019

1. General meeting introductions and acknowledgments

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

Attendees introduced themselves. The following 18 people were in attendance:

<u>Name</u>	<u>Company</u>	<u>Member or Guest</u>
Richard Sévigny	Hydro-Québec	Chairman
Mike Hulse	Bonneville Power Administration	Vice Chairman
Tom Grebe	EnerNex	Webmaster
Jeff Nelson	Tennessee Valley Authority	Member
Hua Liu	Southern California Edison	Member
Gerard Winstanley	NEMA	Guest
Joe Meisner	American Electric Power	Member
Mark McVey	Dominion Energy	Member
Othmane Alaoui	ABB	Member
Biswajit Singh	ABB	Member
Seema Thakur	Dominion Energy	Guest
David Robinson	General Electric	Guest
Kris Zibert	Allgeier, Martin and Associates Inc.	Guest
Glenn Pietschmann	Hubbell Power Systems	Member
Sergio Yamakazi	Siemens	Guest
Bruno Freitas	Siemens	Guest
Ben Leece	American Electric Power	Guest
Vincent Deslauriers	ABB	Secretary

* New Member or Guest, Welcome!

2. Approval of minutes of previous meeting

The minutes from the January 2019 Joint Technical Committee Meeting in Anaheim, California were reviewed. Minutes were unanimously approved as submitted by a motion

from Biswajit Singh that was seconded by Mark McVey.

3. Membership review

The membership roster was sent around for review and correction since unavailable. This subcommittee is open to new members and guests.

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

4. Chairman's report

T&D section has been very active recently. PAR activity has significantly increased. Richard had to mostly abstain because topics are out of the area of expertise of the Capacitor Subcommittee. Roy Alexander was not able to attend to this week meetings but will hopefully attend to next meeting in Jacksonville. Joe Meisner has proposed that William Munn takeover Std 1036 Working group.

5. Liaison reports:

- NEMA – Vincent Deslauriers

NEMA CP8 Section met on August 6. ABB, Eaton/Cooper, Siemens, Hubbell and GE were represented.

IEEE Std 18 §7.1.6 – Performance Test: NEMA will not propose changes on the currents test. NEMA likes the alignment of IEC and IEEE.

Life expectancy calculation of a Capacitor Unit: NEMA could list the items that effect life but worry that the attempt of clarification might mislead users.

NEMA would like to know if there is a need for a DC Capacitor Standard. In the room, BPA, AEP and Dominion Energy seem to be the first interested. Talking about a standard is certainly premature but the application or an application guide is of interest. Testing would also need to be one of the first topic to look at. More investigation is required.

Pancake generic design: Members are positive that this should be added to IEEE std 18. Drawing will be provided by Vincent Deslauriers.

Fuseless Fail Safe Test: Presentation made by Biswajit Singh at the Shunt Capacitor Working Group meeting will be converted to a document that will be circulated to

the NEMA CP8 members for comments and modifications. Agreed version will be issued by the NEMA CP8 section to the IEEE Capacitor Subcommittee.

- IEC, CIGRÉ – Biswajit Singh

The next IEC TC 33 meeting will be held in Frankfurt, Germany on November 13&14, 2019.

IEC TC 33 WG 23 for High Voltage Metalized Film Shunt Capacitors met and a draft of the standard should be issued before the next IEC TC 33 meeting. There was also a proposal to develop a new standard for APFC (Automatic Power Factor Compensation systems) that was rejected.

There is a new specification – IEC TS 63014 – for HVDC power transmission for system requirements for DC-side equipment that has been released in March 2018. Biswajit said that this TS could be used by NEMA or IEEE to establish guidelines for the standard to be developed for DC Capacitors.

Richard Sévigny mentioned that a 15-minute presentation on the Fuseless Fail Safe Test will be done during the next IEC TC 33 meeting in Frankfurt.

CIGRÉ – Biswajit mentioned that there is no specific work on capacitor in CIGRÉ.

NEMA's Gerard Winstanley mentioned that if someone wants to contribute to IEC TC33 or be kept up to date the TC activities, being part the NEMA USNC TAG is a good way for that.

- CIGRÉ – Mark McVey

Mark McVey mentioned that the CIGRÉ W.G. C4/B5 brochure on Overcompensation of Transmission Line with Series Capacitor Banks that includes all of the applications related to Series Capacitor from a system stand point is being finalized and is about to be published.

6. Working group reports:

- W.G. on Capacitor Technical Papers – Tom Grebe

From July 1st, 2018 to July 31st, 2019, 1 IEEE Letter, 4 transaction papers were submitted and reviewed. The IEEE letter and 2 papers were rejected. 1 paper was

accepted, and 1 paper was revised and re-submitted and is currently reviewed. 2 transaction papers have just come in and will be reviewed. There is a need for reviewers. If possible, please contact Tom Grebe about your availability.

- W.G. on Capacitor Bibliography – Richard Sevigny

Nothing to report.

- Shunt Capacitor Working Group – Mike Hulse

The W.G. met on August 6th. The open PAR expires on December of 2020 and may need to be extended in order to allow for balloting. We have got some revision to Annex C and some comments on Thermal Stability that are to be incorporated in the document within the next month. A revised document should be sent out two weeks before our next meeting.

- T.F. on Low Voltage Shunt Capacitor Application – Othmane Alaoui

The W.G. met on August 7th. It was a short meeting. The W.G. is looking for determining what subjects are needed during the panel session. Mark McVey mentioned that a scope needs to be written for each of the topic to be presented during the panel session. Richard Sévigny mentioned that the topics for the panel session will be covered during the Old Business item of this meeting.

- W.G. on Standard for Series Capacitors – Mark McVey

The W.G. met on August 5th for a short meeting. IEEE Std 824 was submitted to IEEE for Ballot and we are waiting for the document to be sent out. There are not many comments expected for IEEE Std 824. The work on IEEE Std 1726 for PAR is started and is almost ready for submission.

W.G. on the Application Guide for Shunt Capacitors (Std 1036) – Joe Meisner

The W.G. met on Tuesday, August 6th with 16 attendees. The meeting was perhaps the last meeting before the standard is published. Only a few editorial comments exist. The approval percentage is at 94%. As mentioned during chairman's report, William Munn will be taking over Std 1036 Working Group. Thanks William for your support!

- T.F. on Capacitor GMD Mitigation – Mark McVey

The T.F. met on August 5th. No progress on the paper. However, information provided by EPRI has been presented to the group.

- T.F. on Capacitor Discharge Limitation Application – Roy Alexander

Roy Alexander was not able to attend so the meeting has been cancelled.

- Guide for Application & Specification of Harmonic Filter – Jan Paramalingam

Mark McVey reporting. The W.G. met on August 7th. Dan Luke was able to fill-in for Jan (Thanks Dan!). Ballot for IEEE Std 1531 was discussed with 10 highlighted details. The rest of the comments were editorial. Document was updated and it will be re-balloted.

7. Old business:

- Panel Session for summer of 2020 - It seems to be general consensus that parties interested to be part to the Panel Session expected to be presented during the next summer General Meeting in Montreal do have to send a title and two paragraphs describing the topic they would like to present during this panel session. Topic title and the two paragraphs are to be sent to Richard Sévigny latest by the end September 2019. Richard will review the topics, coordinate and take arrangement for the Panel Session to happen.

8. New business:

- Joint Venture with the Substation Committee for the TCSC working group

Open discussion – No specific actions.

- Task Force on DC Capacitor Applications

There is clearly of interest for the members. There is almost no literature available on such application domain. Let's see what NEMA can come up with. There is a long way to go so may take some time...

9. Future meetings:

- January 2020 – Jacksonville, FL
- August 2020 – Montreal, QC, Canada
- January 2021 – New Orleans, LA

Meeting is adjourned at 4:40 PM.

Minutes prepared by Vincent Deslauriers with the help of Mike Hulse ☺