

**Capacitor Subcommittee  
IEEE PES Transmission and Distribution Committee  
2021 Joint Technical Committee Meeting Agenda  
Remotely done (Virtual Meeting)**

**Wednesday, January 13, 2021**

**1. General meeting introductions and acknowledgments**

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

Attendees introduced themselves. The following 20 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
Biswajit Singh	Hitachi ABB Power Grids	Member
Mark McVey	Dominion Energy	Member
Jeff Nelson	Tennessee Valley Authority	Member
Roy Alexander	RWA Engineering LLC	Member
Stephen Ladd	Duke Energy	Member
Steve Ashmore	QVARx	Member
Xuan Wu	American Electric Power	Member
Hua Liu	Southern California Edison	Member
Dan Luke	Eaton's Cooper Power Systems	Member
Jan Paramalingam	POWER Engineers	Member
Othmane Alaoui	Hitachi ABB Power Grids	Member
David Robinson	GE Renewable Energy	Guest
Bruce English	General Electric	Member
Sergio Yamakazi	Siemens Energy	Member
Bruno Freitas	Siemens Energy	Member
Karl Fender	Southern states LLC	Guest
Timothy J. Lenberg	Bonneville Power Administration	Guest
Vincent Deslauriers	Hitachi ABB Power Grids	Secretary

\* New Member or Guest, Welcome!

**2. Approval of minutes of previous meeting**

There is no minutes from the August 2020 General Meeting that was supposed to be held in Montréal, Québec, Canada but finally went virtual with very limited success and no

Capacitor Subcommittee meeting.

### 3. Membership review

The membership roster will be updated based on people present to the virtual meeting. 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

Because the August 2020 General Meeting went virtual it was decided not to hold the planned Panel Sessions expecting very low attendance and visibility.

August 2020 General Meeting was the first trial as a virtual meeting because of COVID-19 Pandemic. There was no Subcommittee meeting and the W.G. and T.F. meetings had limited success from an attendance point of view. Meetings were held for the W.G. of IEEE Std 18, IEEE Std 1036, IEEE Std 824 and Capacitor Discharge T.F..

### 5. Liaison reports:

- **NEMA – Vincent Deslauriers**

NEMA CP8 Section met on January 7<sup>th</sup> in order to validate the answer NEMA CP8 wanted to give to the proposed annex C & D of the Fuseless failsafe test. The focus was mainly on annex D.

NEMA CP8 is spending money of 3 projects with the help of consultants:

Project #1 - Scope and High-Level Outline of a DC Capacitor Standard

Project #2 - Scope and High-Level Outline of a Low-Voltage Capacitor Standard

Project #3 – White Paper on how to use of IEEE 18 and IEEE 1036 in Purchasing Specs

Jeff Nelson mentioned that he started to work, long time ago, on a document that could be similar to the white paper of project #3 that is actually prepared by Roy Alexander as a consultant for NEMA CP8. The documents seem more complementary and Jeff Nelson's document is intended to be presented during the next Panel session that the Capacitor Subcommittee still want to participate in.

- **IEC, CIGRÉ – Biswajit Singh**

The last plenary meeting was held in Frankfurt, Germany on November 2019. Major part of the meeting was dedicated to W.G. 23 for High Voltage Self-Healing Capacitors. IEC Standard 63210:2021, Shunt power capacitors of the self-healing type for AC systems having a rated voltage above 1 000 V, will be available on IEC portal.

There was a new standard release from TC115 (IEC TS 63014) that is responsible for HVDC systems. They have released a document that is a guideline for HVDC equipment. TS could be used by NEMA or IEEE to establish guidelines for the standard to be developed for DC Capacitors

Future TC33 plenary meeting will be held in Stockholm, Sweden on November 8, 2022.

Committee TC33 (Power capacitors and their applications) has a new Chairman in Gunnar Ingeström and subcommittee MT19 (Shunt capacitors for a.c. power systems having a rated voltage above 1000 V) has a new Chairman in Richard Sévigny.

- **CIGRÉ – Biswajit Singh and Mark McVey**

Biswajit mentioned that there is several ongoing initiatives related to Surge Arresters but only one related to capacitors i.e. HVDC Light with the objective of reducing the size of the valve vaults that is where major part of the cost is coming from.

Mark McVey mentioned that the CIGRÉ W.G. C4/B5.41 document 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 almost completed and is about to be published. The document mainly deals with highly and largely compensated line because of introduction of renewable.

## **6. Working group reports:**

- **W.G. on Capacitor Technical Papers – Tom Grebe (by Richard Sévigny)**

Nothing to report.

- **W.G. on Capacitor Bibliography – Richard Sevigny**

Nothing to report.

- **Shunt Capacitor Working Group – Mike Hulse**

The W.G. virtually met on January 12<sup>th</sup>. Ongoing work for W.G. is: Updated Ambient Temperature table is in the development, Impulse testing requirement to be matched with other documentation, proposal for Annex C and D to be spun off into some standard and developed there in order not to hold up Std 18 to be progressing. Mike asked to let him know if someone is interested to take over his role as W.G. chair for Shunt Capacitor (he promises a bottle of wine to the person who would take over his role 😊)

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

The W.G. virtually met on January 13<sup>th</sup>. The W.G. working on the technical paper for Low Voltage Capacitors. Participation on Panel Session is delayed but will be conducted at some point. The W.G. is hoping on this Panel Session to get more people interested in the development of this technical paper.

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

The W.G. virtually met on January 11<sup>th</sup> with 17 people attending. The draft document in circulation was covered and around a dozen of comments were submitted and pretty much resolved during the meeting. The document should be updated shortly and then re-circulated for the ballot.

There is a plan for putting a PAR out for the IEEE Std 1726 application guide but work on IEEE Std 827 needs to be completed before.

**W.G. on the Application Guide for Shunt Capacitors (Std 1036) – William Munn**

William is not attending but Chairman mentioned that a new PAR for IEEE Std 1036 should be put in.

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

Paper is 80% completed. Jeff Nelson recommended that we publish the document as a Technical Report. Jeff and Mark will communicate together to look at the

options. Mark intends to hold a meeting to review the document in February.

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

The T.F. virtually met on January 12<sup>th</sup>. Roy mentioned that he is still doing work around discharge testing and main discussions occurred around if 60 Hz current would improve the connection in a failed element.

Roy mentioned that he is looking at different options for publishing his work such as Technical Report or Transaction Paper. Jeff Nelson mentioned that he is more in favor of a Technical Report because of the 8-page limitation of a Transaction Paper but it was also mentioned that there could be several parts to a Transaction Paper. Discussion to be continued...

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

There was no meeting held for IEEE Std 1531 during the JTCM. The new revision of the standard was published on January 11<sup>th</sup> and participants will receive a certificate. Jan is available to start a new PAR for the next revision of the IEEE Std 1531. This is to be discussed during the next IEEE Summer General Meeting.

## **7. Old business:**

- Nothing to report

## **8. New business:**

- Panel Sessions

Because of COVID-19 pandemic, the August 2020 General Meeting went virtual, so it was decided not to hold the planned Panel Sessions expecting very low attendance and visibility. Discussion occurred around when should be ideal to participate in Panel Sessions. No conclusion was agreed on as for when the subcommittee should participate in the Panel Sessions but the people that will be presenting are flexible. Chairman has a T&D meeting on Friday, January 15<sup>th</sup> where he will cross check with the T&D committee for when it should be ideal for the Capacitor Subcommittee to participate. The Panel Sessions that the Capacitor Subcommittee intends to present are:

-Panel 1 (Power capacitor design evolution) 3 subjects:

1. Fuseless new type test need
2. Review of activities of IEEE Std 824
3. Capacitor historical events

-Panel 2 (Power capacitor and their applications) 2 subjects

1. Low voltage compensation
2. Harmonic filter applications for T&D systems

- Capacitor Subcommittee Officer Rotation

Chairman has been advised by the T&D Committee that rotation of the Capacitor Subcommittee Officers is now mandatory. Richard has been holding chairman position for 7 years, Mike has been holding vice-chair position for also 7 years and Vincent has been secretary for 3 years.

Normal rotation to be: Richard to step down, Mike to move as chair and Vincent to move as vice-chair.

Mike mentioned that he is not interested in the chair position. Richard then mentioned that Vincent should move to chair position and proposed Biswajit as secretary and Xuan as vice-chair.

Othmane second Vincent as chair.

Biswajit, Xuan and Vincent accepted their new position and the group is supporting the new officers in their new roles. The IEEE Capacitor Subcommittee will be composed as follows:

Vincent Deslauriers	Hitachi ABB Power Grids	Chairman
Xuan Wu	American Electric Power	Vice Chairman
Biswajit Singh	Hitachi ABB Power Grids	Secretary

The group expressed their gratitude to Richard and Mike for their support to the IEEE Capacitor Subcommittee during all those years.

## 9. Future meetings:

- August 2021 – Virtual Meeting
- January 2022 – Hyatt Regency Orange County, Garden Grove, CA

Meeting is adjourned at 5:08 PM.

Minutes prepared by Vincent Deslauriers.