

MINUTES

IEEE PES HVDC AND FACTS SUBCOMMITTEE MEETING

Time: 1:30 - 4:30 pm EDT on Wednesday, 7 August 2019
Location: Crystal Ballroom AF, Hilton Atlanta
Atlanta, GA, USA

*Chair: Dr. Brian Johnson, University of Idaho; Vice-chair: Dr. Rajiv Varma,
University of Western Ontario*

AGENDA

1) Welcome and Announcements

Call to order at 1:30pm by Brian Johnson, 35 members and guests attended.

2) Introductions

Attendees introduced themselves.

3) Approval of the August 2019 Meeting Agenda

- Approved by acclamation

4) Approval of the Minutes of the Aug. 8, 2018 subcommittee meeting

- Approved by acclamation

5) Working Group Reports

***I. WG 15.05.02 Dynamic Performance and Modeling of HVDC Systems and
Power Electronics for Transmission Systems***

Ram Adapa reported: The working group met on Monday, August 5, 2018 at 2:00 PM.
There were 22 attendees.

1. The previously developed documents under this WG were discussed for follow up action
2. Dr. Ani Gole made a presentation on the proposed 12 bus IEEE test system. The progress on the development of an IEEE paper on the 12 bus system was presented.
3. Garth Irwin made a short presentation on developments of using controller code directly into the EMT control models.
4. Dr. Ani Gole gave a presentation with the title “Investigation of Control Interaction for LCC using the generalized Nyquist stability criterion” about the analysis of system impedance changes due to the LCC.
5. Two main topics were identified as future work of the WG: i) “Use of Real-Code in EMT Models for Power System Analysis”, and ii) “Impedance modeling of stability analysis of HVDC and FACTS”

II. WG 15.05.08 HVDC Economics and Operating Strategies

Mike Henderson reported. About 80 persons attended the working group meeting.

- Moment of silence to present respects to Dr. Prabha Kundur and William Tinney
- About 90 people attended the Panel session organized by the WG this year.
- Possible volunteers for 2019 Panel session were discussed.
- The performance of the WG was surveyed and suggestions were made to facilitate the understanding of new members
- The WG requested to keep similar meeting and panel times for the PES GM 2019

III. WG 15.05.14 Education on HVDC and FACTS

Brian Johnson presented; The combo meeting of the WG 15.05.17 and WG 15.05.14, was not held this year.

Requested for Panel Session at PES T&D conference 2020

IV. WG 15.05.17 Bibliography of HVDC and FACTS

Rajiv Varma presented; The combo meeting of the WG 15.05.17 and WG 15.05.14, was not held this year.

- Rajiv summarized the work completed by the WG over the past 15 years
- A total of 53 Bibliography papers have been published as IEEE PESGM conference papers on HVDC, FACTS and FACTS applications in wind and solar power systems

V. WG 15.05.18 Studies for Planning of HVDC

WG 15.05.19 Practical Technologies for VSC HVDC Systems (Joint Report)

The Minutes (although not included here) will be appended to these Minutes

VI. P2745– Unified Power Flow Controller Working Group

The fifth WG meeting of IEEE UPFC_P2745 series was convened on August 6 2019

- Yi Yang (SGCC) reported.
- 10 members attended
- The draft and comments for P2745.3/D2 were discussed by all and a consensus on the feedback of comments was reached by the attended WG members (29 comments).
- The draft and comments for P2745.2/D1 were discussed, and P2745.2 will cover the definitions of P2745.1/P2745.3/P2745.4 (if any) and be reordered according to object classification, such as primary equipment (converter, series transformer, shunt transformer, fast pass system), control & protection, test & commissioning.
- The detailed comments, proposed changes and resolutions were filled in the comment table according to the discussion and consensus.

Action items:

- According to the discussion and comments, all agreed to send revised P2745.3/D2 to SGCC-JEPRI before September 15, 2019.
- Chair Yi Yang will submit the P2745.3/D3 to IEEE PES T&D committee and HVDC&FACTS subcommittee for comments before October 15, 2019.

- Chair Yi Yang will modify and submit the new PAR on UPFC control and protection application to IEEE SA using myProject for review before September 1, 2019.
- Chair Yi Yang will send the P2745.2/D2 to WG for comments before the 6th WG meeting.
- The 6th WG meeting to be held in China in December, 2019.

6) Wrap up of HVDC and FACTS Bibliography WG

Rajiv Varma stated the following:

- The Bibliographies were prepared by graduate students since 2014. This work is very time intensive.
- No financial support was available except for contributions from Dennis Woodford, Neil Kirby and Ben Mehraban in one year
- A significant motivation for graduate students was that these papers will be published as PES GM papers
- However, IEEE has discontinued the practice of publication of Bibliographies.
- It is felt that the WG has lived its useful life and hence requested that the WG be wrapped up.

The Subcommittee members applauded the efforts of all the graduate students involved in these Bibliographies.

Rajiv Varma made a motion to wrap up the WG which was approved.

7) Plans for panel sessions or tutorials for 2019 were discussed.

8) HVDC and FACTS Subcommittee Website Update

The excellent work done by Coleman Smith in developing the Subcommittee was presented. The new site is functional, but not populated. WG chairs are requested to review the status of their respective information.

Old: <http://www.ece.uidaho.edu/hvdcfacts/>

New: <http://sites.ieee.org/pes-hvdcfacts/>

9) Award Committee Updates

- a) Uno Lamm Award Committee (Dennis Woodford)
 - i) The Uno Lamm Award was given to Mr. Abhay Kumar, India
 - ii) Dennis asked meeting attendees to recommend potential candidates
 - iii) Subcommittee needs to be proactive finding people for this award
- b) Narain Hingorani Award Committee (Ram Adapa)
 - i) Custom Power award given to Dr. Arindam Ghosh, Australia
 - ii) FACTS award not given
- c) New Fellows from subcommittee (Rajiv Varma)

Claudio R. Fuerto-Esquivel was made IEEE fellow

10) Report on CIGRE-US National Committee

Ben Mehraban reported.

11) Reports of Substation Subcommittee

Jan Paramalingam reported the details.

12) Liaison Reports

- a. Overhead Lines - HVDC Line Design Guide TF
 - i. Ram Adapa reported
- b. CIGRE B4
 - i. Mark Reynolds reported

13) Old Business

- a) Awards Nomination Committee (Mark Reynolds). Report provided. Work in progress.
- b) Suggested having Panel Session Chairs nominate Best Presentation.
- c) Existing Awards at Subcommittee Level:
 - i) Outstanding Service
 - ii) Best WG
 - iii) Best Panel Presentation
 - iv) Best Papers from HVDC and FACTS
- d) Subcommittee Endorsements for IEEE Fellow nominations:
 - The Subcommittee will be willing to provide Endorsements for Awards when requested.

14) New Business

The PSOPE WG on Wide Area Overlay Studies was invited to present.

15) Presentations:

The following presentations were made:

- 1) “Status of 800kV Multi-Terminal NEA800 and RP800 HVDC Projects in India”.
Presenter-Dr. Abhay Kumar.
- 2) “Status of the Euro-Asia Interconnection, from Greece to Crete to Cyprus to Israel”.
Presenter- Dr. Vajira Pathirana.
- 3) “Status of EPRI HVDC R&D Program”. Presenter- Dr. Ram Adapa.
- 4) “Offshore Grid Access in the US – Interconnecting Offshore Windfarms with HVDC”.
Presenter-Mr. Orestes Macchione.

16) General Reports on HVDC and FACTS Projects/Developments

The attendees described the HVDC and FACTS projects in which they were involved.

17) Next Meeting:

The next meeting will be held in the IEEE PES General Meeting at Montreal 5th August, 2020.

18) Adjourn

Prepared and respectfully submitted by,
Brian Johnson
Chair
and
Rajiv Varma
Vice Chair