



Colloquium on
HVDC and Power Electronics Systems
For Overhead Line and Insulated Cable Applications

Organized by the US National Committee of CIGRE and CIGRE Study Committees

B4 HVDC and Power Electronics

B2 Overhead Lines and

B1 Insulated Cables

Dates: Wednesday March 7 through Friday March 9, 2012

Locations: Hotel Nikko, San Francisco, California, USA

Call for papers

Background

CIGRE Study Committees B4, HVDC and Power Electronics, B2, Overhead Lines and B1, Insulated Cables with support from the US National Committee is organizing a colloquium to discuss recent advances in the use of High Voltage DC and Power Electronic Systems for power transmission. The colloquium will focus on high efficiency HVdc converters recently introduced for underground and submarine cable applications. Power electronic systems for AC applications will also be covered since long distance series compensated ac overhead transmission lines are of high interest for transmission of wind power to load centers. High quality papers are being solicited for presentations at the colloquium, which will be held in San Francisco, CA, USA between March 7 and 9, 2012. A visit to a recently commissioned new Voltage Source Converter (VSC) for the TransBay Cable 400 MW dc link into San Francisco will be an optional technical tour in conjunction with the colloquium.

San Francisco is the home of the latest VSC development, which is a 400 MW 53 mile long submarine cable link feeding the City of San Francisco. The Western US is also home to the first HVdc link; the 1440 MW Pacific HVdc Intertie between the Columbia River in the Northwest and Los Angeles. This system has been updated and upgraded and is now rated 3,100 MW. Furthermore, the first two Thyristor Controlled Series Compensation Systems (TCSC) were demonstrated in the Western power system; the Western's Kayenta system and Bonneville's Slatt system. The region is also investing in wind and solar power systems.

Scope of the Colloquium

The Colloquium will cover a range of topics with emphasis on technologies for efficient power transmission systems and on improving the utilization of existing power transmission systems, which could be used for transmission of renewable energy to regions that need additional electric power. Within this context, the topics will include the following:

HVDC Conversion Systems

Advances in voltage source converter (VSC) technologies

- **Multi-modular converter (MMC) designs**
- **Pulse width modulation (PWM) converter designs**
- **Efficiency of MMC and PWM converter systems**

Overhead versus underground power transmission using VSC systems – system design considerations

VSC for conversion of ac lines to dc; multi-terminal and tapping aspects

AC Applications

Power electronic systems for ac line applications

Wind power from remotely located wind power plants using series compensated ac systems

Overhead Lines

Electrical Performance of Existing DC Lines

Thermal loading of lines; limiting factors

Maximizing utilization of existing lines

Techniques for improving power flow distribution – Cost v. Benefit

Conversion of ac lines to dc – Pros & Cons

Regulatory barriers to increasing power flow on existing lines

Cable Applications

Long distance underground transmission dc cables

Applications for HVDC cable systems

Connection to load centers

Submarine cable installations

DC land cables

Dual ac / dc cable designs

AC or dc connections to off-shore renewable energy power plants or other platforms

DC HT Superconducting cable technologies

Technical Visit

Trans Bay Cable Company LLC's Converter Station in San Francisco on Friday March 9, 2012

Participants

The colloquium will be informative and beneficial for generating companies, transmission system planners, designers, operators, asset owners and managers, equipment developers and manufacturers, research institutions and universities, and policy makers and regulators.

Important Dates

The organizing committee invites authors to prepare and submit their synopses, papers and presentations as per the following schedule:

Submission of synopses	September 30, 2011
Authors informed of synopsis acceptance	November 15, 2011
Submission of papers	January 15, 2012
Submission of presentations	January 15, 2012

- Synopses shall be at least 500 words. A template for the synopsis is attached to this call for papers.
- When Synopses are accepted, authors shall submit papers with 6 pages or less and formatted in Adobe Acrobat pdf.
- Presentations shall be formatted in Microsoft PowerPoint 2003 or PowerPoint 2007.
- The papers will be provided to all attendees of the colloquium in form of a memory stick.

Submissions

The synopses, papers and presentations must be sent electronically to:

Willis F. Long
Professor Emeritus
University of Wisconsin
E-mail: willis@engr.wisc.edu

Contact

For any further information about the colloquium, please contact:

<http://cigre-usnc.tamu.edu/meetings.html>



2012 San Francisco Colloquium

<http://www.cigre.org>

Type here the Colloquium Topic

Type here the title of your synopsis

(Helvetica or Arial Bold size 12 and 5cm (2") from the top

Type here the authors' names (initials, name in capitals, Times Roman, bold, size 12)

Type here the Company

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Type here the email address of the main author

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