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CIGRE SC B2

OVERHEAD LINES

2008 ACTIVITY REPORT

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1. Highlights

- The change of SCB2 organization from Permanent WG to Non permanent WG is nearly finalised : 2 WG are finalising their TB before disbanding : WGB2.08 & WGB2.16
- Seven Electra Articles linked with 7 Technical Brochures have been published
- Nine tutorials held in 2008 by the WGs : JWGB2/C1.19 (Increasing capacities), AGB2.06 (galloping), JWGB2/B4.17 (HVDC Systems), WGB2.23 (Foundations), WGB2.13 (Increased utilization of OHL) , Cigre Canada (SCB2)
- New technical directions : AC-> DC Lines, real time monitoring, Increase of voltage level, innovative solutions for reducing OHL impacts on the environment.

2. SC working bodies : new and disbanded WB since the last March TC meeting

According to the decision of TC, SCB2 is reorganising its activities creating new WG with focused TOR and disbanding old permanent WG.

Five working groups have been disbanded since last TC meeting in March 2008 :

- WG B2.07 "Foundations"
- WG B2.13 "Maintenance and Management of Existing OHL"
- WG B2.11 "Mechanical Behaviour of Conductors and Fittings"
- JTF B2/D2.18 "Geographical and Asset Information System for OHL"
- TF B2.20 "Management of Risk to Load Flow Increase on OHL"

Two new WG have been created :

One within the technical area of "Insulators, foundations and towers" :

- WG B2.23 : "Geotechnical and Structural Design of the Foundations OHL"

One within the technical area "Asset Management, Reliability and Availability" :

- JWG B2/B3.27 : "Live Working Maintenance : a management perspective"

Two old permanent WG are going to be disbanded before mid 2009, waiting the publication of their last report or technical brochure :

- WGB2.08 : "Transmission Line Structures"
- WGB2.16 : "Meteorology for Overhead Lines"

In order to develop overall optimised system solutions, SC B2 cooperates with the systems oriented study committees of CIGRE in the following two joint working groups (**JWG**):

- Impact of HVDC lines on the economics of HVDC project (**JWG B2/B4/C1.17**) which will finalised its work in 2009 (disbanded in 2009) .
- Increasing capacity of overhead lines (**JWG B2/C1.19**). This JWG started activities in 2004 and will be disbanded in 2009.

3. SC publications and tutorials since the last March TC meeting and publication plan for 2009 and beyond

In 2008, SC B2 has produced numerous results among which the publication of 6 Electra articles, including 7 technical brochures :

- Electra #237 TB #344-April 2008	Big storm events : what we have learned (WG 06)
- Electra #237 TB #345 –April 2008	AC resistance of helically stranded conductor (WG 12)
- Electra #238 TB #348- June 2008	Tower top geometry and mid-span clearances (WG 06)
- Electra #238 TB #350- June 2008	How OHL are respond to localize high intensity wind (WG 06)
- Electra #239 TB #353- August 2008	Guide for increase capacity of existing OHL (WG 13)
- Electra #241 TB #363- December 2008	Reliability based calibration of foundation strength factor (WG 07)
- Electra #241 TB #365 – December 2008	Use of power arc protection devices for composite insulator on OHL (WG 21)

Nine tutorials sessions were held in 2008 by the WG's :

- **JWG B2/C1.19** Increase Capacity of OHL (P. Pramayon, convener)
 - Paris, France, June 2008
 - SEMINAR ON INCREASING CAPACITY ON OVERHEAD LINES : NEEDS AND SOLUTIONS, 65 participants
- **AG B2.06** - Tutorial on Conductors Galloping (J. L. Lilien, convener),
 - Sherbrooke, Canada: Tutorials to student and teachers, January 2008
 - Las Vegas, USA, IEEE conference, January 2008
 - Arlington, USA, WISMIG, April 2008
- **JWG B2/B4.17** HVDC Systems – Design and Economic
 - Buenos Aires, Argentina: Seminar HVDC, June 2008
 - About 180 persons attended this presentation.
- **WG B2.23** Foundation (N. Cueur, convener), tutorial
 - Perth, UK, part of 3 days training, February 2008
 - About 13 engineers from one UK utility
 - Capenhurst, UK, EA technical forum, March 2008
 - About 12 engineers from UK utilities
- **WG B2.13** Guide for increased utilisation of existing OHL (K. Lindsey, convener), tutorial
 - Pittsburgh, USA, IEEE session, July 2008
 - About 100 persons attended the presentation.
- **CIGRE Canada** Technology and Innovation
 - Winnipeg, Canada, CIGRE annual conference, October 2008
 - Z. Kieloch was the session chair for OHL
 - 7 papers were presented.

For 2009, following publications are scheduled, the 6 first one have already been sent to Cigre Secretariat for publication :

1- Electra ____TB 2009	Development of information system, as far as geographical and asset management (JTFB2/D2.18)
2 - Electra ____TB 2009	Basic Electric and Mechanical Performance of HVDC System (WGB2/04.17)
3 - Electra ____TB 2009	Management of risks due to load flow increases on OHL (TF B2.20)
4 - Electra ____TB 2009	Influence of the hyperstatic modeling on the behaviour of OHL tower (WG 08)
5 - Electra ____TB 2009	Comparison of general practice for lattice tower design an detailing (WGB2.08)
6 - Electra report	Large overhead lines crossing (WG 08)
- Electra ____TB 2009	Guidelines for design wind speed calculations in local topography (WGB2.16)
- Electra ____TB 2009	Fatigue endurance capability of conductor / clam system (WGB2.30)
- Electra ____TB 2009	Improvement on the tower testing methodology (WGB2.08)
- Electra Report	On the structural interaction between transmission line towers and foundations (WG 08)
- Electra Report	The effect of fabrication and erection tolerances on the strength of lattice steel transmission towers (WG 08)
- Electra ____TB 2009	Increasing Capacity of OHL (JWG B2/C1.19)
- Electra ____TB 2009	Guide to evaluating and accepting new types of OH conductor including those running at high temperature (WG B2.26)

4. SC Strategic Plan and Action Plan : status

The main changes to the SC was the issue of non permanent working groups and the transition to new WGs. The SC has accepted shorter term (4 years) life of working groups. An action plan was drawn ensuring that the productivity is not decreased, that networking is maintained and that information from old working groups is not lost. The action plan stated that:

- The new 2009 working groups are to be proposed with tasks focused for the next 3 years.
- All actual conveners have proposed new future activities with terms of reference for each new topic and new WG. These new topics were based from a list of items coming from the SC B2 Target Groups .

Three advisory groups dealing with Strategic direction, Customer needs and Publications and Tutorials were defined to ensure better participation from the SC members.

Four advisory groups are created to coordinate WG, prepare new items of work to submit to CAG and SC chairman, to organise tutorials between several WG, to attract new WG members.

5. SC planned meetings in 2009 and beyond

The next Technical and Administrative meetings will be held in Korea in October 2009, in Paris in 2010 and in ICELAND in 2011.

6. SC participation to Regional Meetings and Symposia : in 2008 2009 and beyond 2009.

2008- ARGENTINA : SCB2 and SCB4 have largely participated to the Seminar organised in Buenos Aires on HVDC Systems : design and economics on the 5th and 6th June where 180 participants attended . It was very well organised by the Argentina National Committee of Cigre, by JWGB2/B4.17 and supported by

- RIAC : IBERIAN AMERICAN REGION OF CIGRÉ,
- BRAZILIAN NATIONAL COMMITTEE OF CIGRÉ
- and CHILEAN NATIONAL COMMITTEE OF CIGRÉ .

2008- CROATIA : The International CIGRÉ Colloquium 2008 in Cavtat, CROATIA 25-29 MAY. 2008 was organised by the Study Committees C4 (System Technical Performance) in cooperation with the Croatian National Committee and SCs A3 (High Voltage Equipment) and B2 (Overhead Lines). The goal of the Colloquium was to examine the various aspects of line arrester application (LSA) from system aspects to apparatus aspects.

2009- BOSNIA & HERZEGOVINA : SCB2 has proposed to organise an International Colloquium untitled “Power Frequency Electromagnetic Fields – ELF / EMF” : the call for papers has been edited : more than 50 reports will be presented in Sarajevo, Bosnia and Herzegovina June 03-04, 2009.

2009-KOREA : in October 2009, KOREAN National Committee will organise 2009 CIGRE B2 765kV Technology Colloquium untitled Design & Operation Technologies of Above 700kV class Transmission Lines on Oct. 23 at Gyeongju and SCB2 will organised 2 tutorials : one on Increasing capacities of OHL and another one on Towers : Oct. 20, KEPCO Head office.

7. Relations with other Organisations

WGs of SC B2 have regular exchanges with IEC TC 11, TC 36. Some WG are preparing technical reports which are then discussed within IEC MT (e.g : MT1 from IEC) or CENELEC WG (WG09 from CLTC 11) for publication of new IEC or CENELEC standards.

Links with the Canadian Electric Association may also be pursued.

8. Specific actions for the recruitment of young experts

Students have been invited to participate in new WG such as WGB2.29 on Anti- and de-icing systems for overhead lines and when Tutorials are presented, students are invited to attend.

9. SC website : on-line contents and date of last update

SC B2 has its own web site [<http://www.cigre-scb2.org>] in which all documents are published and may be downloaded. The web site receives 276727 hits in 2008. SCB2 web site is up dated every 2 months.