

## 1. Main Strategic Directions

- Get more out of the existing transmission lines
- Provide for more reliable transmission lines
- Ensure environmentally compatible lines
- Operate lines at their thermal limit

## 2. Study Committee Structure

- SC B2 Convenor: Konstantin Papailiou (Switzerland)
- SC B2 Secretary: Normand Bell (Canada)
- Canadian Representative: Zibby Kieloch (Manitoba Hydro)

Four Technical Advisory Groups:

- Electrical Performance of Overhead Lines (6 WG's)
- Towers, Foundations, Insulators (3 WG's)
- Mechanical Behaviour of Conductors and Fittings (7 WG's)
- Asset Management, Reliability and Availability (11 WG's)

Two additional Advisory Groups:

- Customer Advisory Group
- Publications and Tutorials Advisory Group

A total of 27 Working Groups.

## 3. Membership

- 24 Regular Members (including Canada)
- 11 Observer Members
- 200+ technical experts
- 37 Canadians in all but 2 Working Groups
- 3 Canadians as Working Groups Convenors

#### 4. Active Working Groups

- WG B2.21 Arc protection and diagnosis for composite string insulators
- WG B2.22 Mechanical security of overhead lines with effective failure containment measures: design loading cases and strategies for effective anti-cascading supports
- WG B2.23 Geotechnical and structural design of the foundations of HV & UHV Lines
- WG B2.24 Qualification of HV and UHV OHL supports under static and dynamic loads
- WG B2.25 Preparatory studies on specifications for revision of IEC testing of self damping and conductor fatigue characteristics (new IEC Spec.), for high temperature fittings (IEC 61284), for tests on spacers (IEC 61854) and on dampers (IEC 61897)
- JWG B2/B3.27 Live-Line Maintenance - A Management Perspective
- WG B2.28 Meteorological data for assessing climatic loads. Update of IEC TR 61774
- WG B2.34 The impact of line configurations on electric and magnetic fields, radio interference and audible noise for 800 and 1000 kV OHL
- WG B2.36 Guide for application of direct real time monitoring systems on overhead transmission lines
- WG B2.38 Evaluation of high surge impedance load solutions for increased natural capacity for OHL
- WG B2.39 Validation of design guidelines implemented for HIW
- WG B2.40 Calculations of the electrical distances between live parts and obstacles for OHL: Preparatory studies for revision of IEC standards (IEC 61865, IEC 60826, EN 50341)
- WG B2.41 Guide to the conversion of existing AC lines to DC operation

- WG B2.42 Guide to operation of conventional conductor systems above 100°C
- WG B2.43 Guide for thermal rating calculations for overhead lines with high temperatures and real-time weather & load data
  
- WG B2.44 Coatings for protecting overhead power network equipment in winter conditions
  
- WG B2.45 Bushfire characteristics and the potential impacts on overhead line performance
  
- WG B2.46 Wind Induced motion on bundled conductors (excluding ice galloping)
  
- WG B2.47 Remedial actions for aged fittings & repair of conductors
  
- WG B2.48 Experience with the mechanical performance of new conductor types
  
- WG B2.49 Safe design tensions for conductors fitted with elastomer cushioned suspension units
  
- WG B2.50 Safe handling of fittings and conductors
  
- WG B2.51 Methods for the optimized design of overhead transmission lines
  
- WG B2.52 The use of robotics in assessment and maintenance of OHL
  
- WG B2.53 Management guidelines for outsourcing OHTL technical expertise
  
- WG B2.54 Management of Risk Associated with Severe Climatic Events and Climate Change on Overhead Lines

## 5. Meetings and Events

March 24-25, 2011  
Paris, France

2<sup>nd</sup> International Conference On ELF/EMF

July 2-8, 2011  
Reykjavik, Iceland

SC B2 Annual Meeting and Conference

September 13-15, 2011  
Bologna, Italy

The Electric Power System Of the Future  
Symposium

August 26-31, 2012  
Paris, France

2012 CIGRÉ Session  
Preferential Subjects for SC B2:  
• PS1: Improved Utilization of OHL  
• PS2: Condition and Assessment of OHL  
• PS3: Maintenance and Refurbishment of OHL

## 6. Recent Publications

- ELT\_249\_2 & TB\_410      Local Wind Speed-Up On Overhead Lines For Specific Terrain Features
- TB\_416      Innovative Solutions for Overhead Line Supports
- ELT\_251\_2      Investigation of Different Liquid Solutions for Dye Penetration Tests used in Standard IEC 62217 for Design and Routine Testing
- ELT\_251\_7      Increasing Capacity of Overhead Transmission Lines: Needs and Solutions
- ELT\_251\_8 & TB\_426      Guide for Qualifying High Temperature Conductors for Use on Overhead Transmission Lines
- TB\_428      The Effect of Fabrication and Erection Tolerances on the Strength of Lattice Steel
- TB\_429      Engineering guidelines relating to fatigue endurance capability of conductor/clamp systems
- ELT\_253\_3 & TB\_438      Systems for Prediction and Monitoring of Ice Shedding, Anti-Icing and De-Icing for Overhead Power Line Conductors and Ground Wires
- ELT\_256\_3      Modeling of Aeolian vibration of single conductors strung at relatively high tensile load. Application to HV & UHV lines.