

## ***Closing session***

### ***Round Table.***

***State of the art and future prospects of HVDC links  
by insulated power insulated cables***

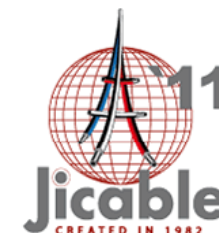
Pierre Argaut

CIGRE SC B1

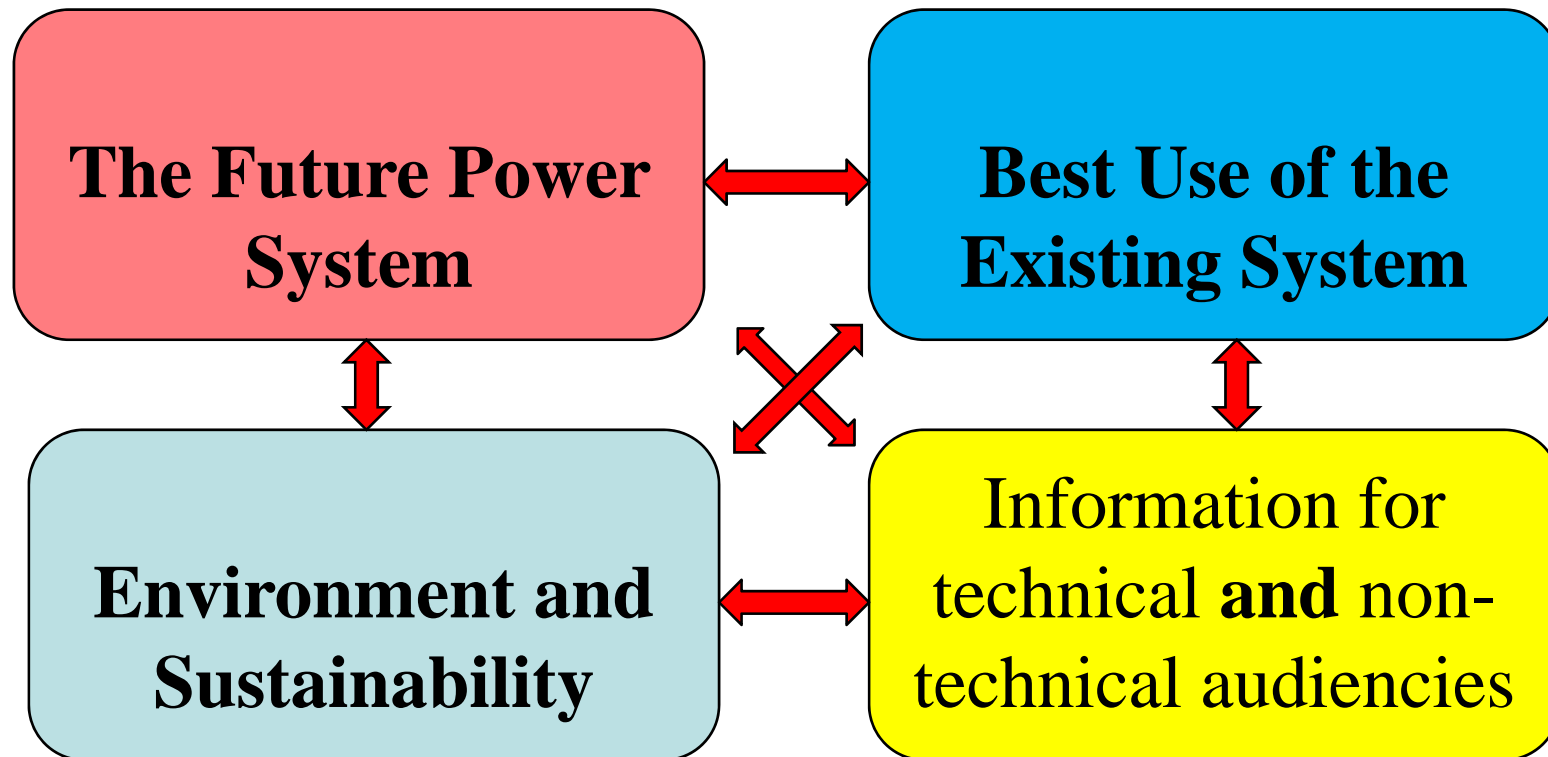
**June 22 th, 2011**



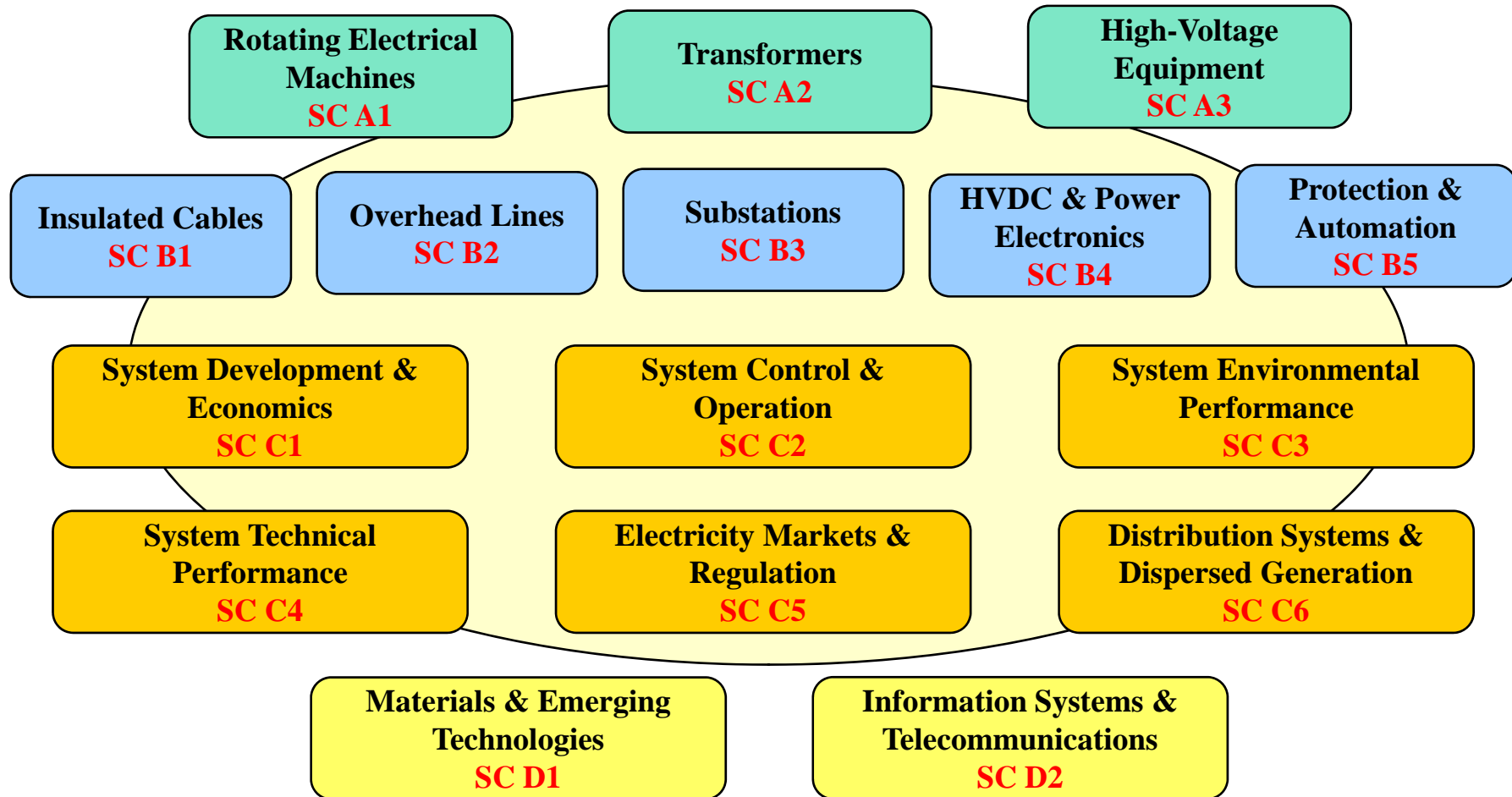
**JICABLE 2011**  
Versailles, 22 Juin 2011



# Four Strategic Directions adopted by TC of CIGRE



# CIGRÉ Study Committees



SC = Study Committee

# The Cable in the Future

- More transmission.
- Larger share will be cables.
- Larger share of extruded cables.
- Longer cable circuits.
- Increased focus on asset management.

# Cables within CIGRE: SC B1 (Insulated Cables)

- **Founded in 1927 (84 years old)**
- **34 SC Members**
- **200 experts in the Working Bodies**
- **169 publications since 1969**

## Fields of Activity of SC B1

- **Power cables in all phases of life**
- **Submarine, underground, ducts, tunnels...**
- **HVDC and HVAC Cable Systems but also distribution cables if necessary.**
- **To write the state of the art and recommendations for further input to IEC**

# Some Recent Publications of SCB1

<b>Year</b>	<b>TB No</b>	<b>Title</b>
2004	247	Optimization of power transmission capability of UG cable systems using thermal monitoring
2004	250	Technical and environmental issues regarding the integration of a new HV UG cable system in the network
2005	279	Maintenance of HVAC UG cable and accessories
2006	303	Revision of qualification procedures for HV and EHV AC extruded UG cable systems
2007	338	Statistics on UG cable in transmission networks
2008	358	Remaining life management of existing HV AC underground lines
2008	351	Application of long high capacity GIL in structures
2009	379	Update of Service experience on UG and submarine cables
2009	398	Third party damages on UG and submarine cables
2010	403	Cable systems in multipurpose or shared structures
2010	415	Test Procedures for HV Transition Joints for Rated Voltages 30kV up to 500kV
2011	446	Advanced design of laminated metallic coverings

# Publications to come

<b>Year</b>	<b>TB No</b>	<b>Title</b>
<b>2011</b>		<b>Cable accessories workmanship</b>
<b>2011</b>		<b>Upgrading and uprating of existing cable systems</b>
<b>2011</b>		<b>Impact of EMF on current ratings and cable systems</b>



# Active Working Bodies in SCB1

WG	B1.22	Cable accessories workmanship
WG	B1.23	Impact of EMF on current ratings and cable systems
WG	B1.27	Test Recommendations on XLPE AC Submarine Cables from 170 kV to 500 kV
WG	B1.28	On site Partial Discharge Assessment
WG	B1.29	Guidelines for maintaining the integrity of XLPE transmission cable accessories
WG	B1.30	Cable system electrical characteristics
WG	B1.31	Testing of HTSC cable systems
WG	B1.32	Testing extruded DC cables up to 500 kV
JWG	B1/B3.33	Feasibility of a common dry type interface for GIS terminations above 52 kV
WG	B1.34	Mechanical forces in large cross section cable systems
WG	B1.35	Guide for cable rating calculations
WG	B1.37	Guide for operation of fluid filled cable systems
JWG	B3/B1.27	Factors for Investment decision GIL vs Cables for AC Transmission
JWG	C3/B1/B2.13	Environmental concerns, procedures, impacts and mitigation issues of HV transmission lines for rural and urban areas.

B1.32 has produced an [intermediate report](#) in 2010 (Electra 250)



# Preferential Subjects for 2012

***Preferential Subject 1 : Experience in newly installed or upgraded underground and submarine AC and DC cable systems***

- Design, installation techniques, operation of cable systems
- Problems raised by long cable systems

***Preferential Subject 2 : State-of-the-art and trends for cable system rating, testing and monitoring***

- Static and dynamic cable rating calculations
- Qualification, type testing, routine, sample, after installation testing
- Diagnostic testing of cable systems
- Trends in monitoring

***Preferential Subject 3 : Insulated cables in the Network of the Future***

- Next higher voltage levels for ac and dc cables
- Conversion of AC cable circuits to HVDC operation
- New functionalities expected from cable systems

SC B1 INSULATED CABLES

JICABLE 2011

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# Next Events

- Bologna Mid [September 2011](#)
- San Francisco March [2012](#)