



**CIGRE**

**The International Council on Large  
Electric Systems**

**Conseil International des Grands  
Réseaux Électriques**

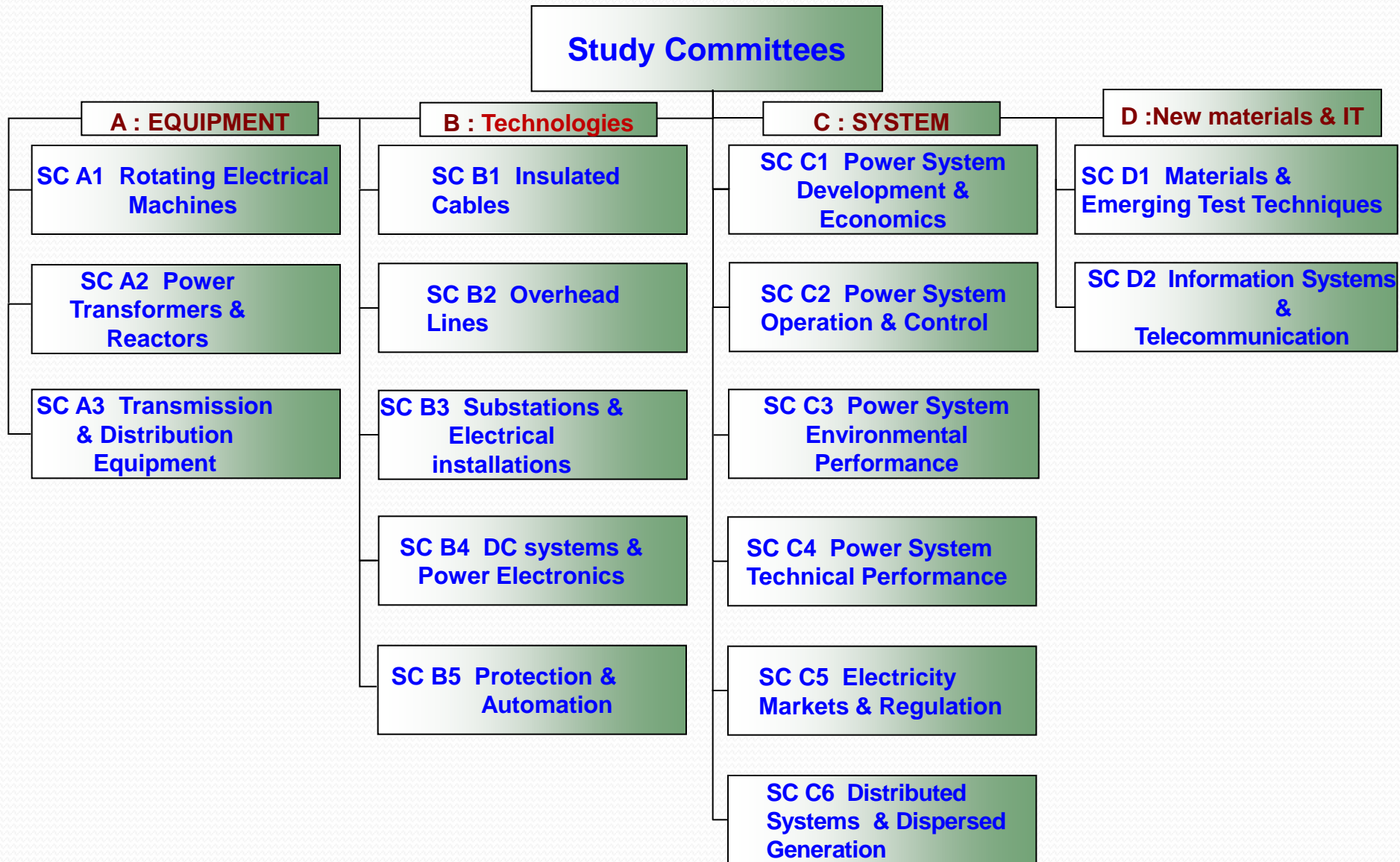
# ABOUT CIGRE

- CIGRE was Founded in 1921 at PARIS and it is an International organisation for development of Electric Power System.
- It has world wide network of experts from Generation, Transmission, Distribution cos. & System Operators as well as Regulators; Manufacturers; Academicians; Consultants, etc.
- It has about 10,000 members from around 95 countries.
- **CIGRE is basically focused on practical applications of Power System.**
- As a major benefit, CIGRE Members are provided Free online access to 9000 valuable technical publications based of studies carried out by its experts

# AIMS & OBJECTIVES

- CIGRE aims to promote & organize collaboration with experts in power system.
- To produce unbiased high-quality technical information through Publications e.g. Technical Brochures, Papers in the ELECTRA journal, Session/Symposia Papers.
- Exchanges technical knowledge with partners of CIGRE (IEC; IEEE, CIRED).
- It organizes, every two years, a conference known as a 'Session held in Paris.
- In the non Session year it organizes 'Symposia' spread in various locations around the world.
- Through its sixteen 'Study Committees' (each with multiple 'Working Groups') it carries out and encourages international studies, coordinated by the CIGRÉ 'Technical Committee'.
- These 16 technical Study Committees, are consisting of 24 members from different countries
- 250 Working Groups on the average produce about 50 Technical Brochures per year.

# Four Groups of CIGRE Study Committees



# ABOUT CIGRE INDIA

- **CIGRE-India has been a member of CIGRE Paris since 1949 and on the Administrative Council of CIGRE Since 1970.**
- **The CIGRE India is Head Quartered in CBIP Building at New Delhi, which is also the Head Quarter for 10 other International Societies**
- **It functions as the National Committee for CIGRE with same objectives as of CIGRE, relevant to the Indian requirements.**
- **Affairs of CIGRE-India are administered by its General Body / Governing Council**
- **National Committee coordinates various CIGRE activities in India like Membership; Meetings of NSCs and Organises International & National Events and Training for dissemination of knowledge.**

# Governing Body of CIGRE-India

## President –CIGRE(India)



**I.S. Jha, CMD, POWERGRID**

## Vice- Presidents



**A.K. Gupta**  
*Director, NTPC*



**S. Balakrishanan**  
*Director, BHEL*



**Seema Gupta**  
*Director, Powergrid*

## CIGRE Chairman



**Dr. Subir Sen**  
**ED, POWERGRID**

## AORC Secretary



**Mr. P.P. Wahi**  
**Director, CBIP**

## Technical Council Chair



**R.P. Sasmal**  
*Former Dir. Powergrid*

## Vice-Chair



**N.N. Misra**  
*Former Dir. NTPC*

## Secretary CIGRE - India



**Mr. V.K. Kanjlia**  
**Secretary, CBIP**



# Chairpersons of CIGRE - India National Study Committees (NSC) 2018 - 2020



Seema Gupta  
Director, Powergrid  
Chairperson CIGRE NSC A2



B.B. Chauhan  
MD, GETCO  
Chairman CIGRE NSC C4



K.V.S. Baba  
CMD, POSOCO  
Chairman CIGRE NSC C2



Subir Sen  
ED, Powergrid  
Chairman CIGRE NSC C6



Jithin Sunder  
ED, BHEL  
Chairman CIGRE NSC D1



P.K. Aggarwal  
Dir., POSOCO  
Chairman CIGRE NSC C5



R.K. Chauhan  
ED, Powergrid  
Chairman CIGRE NSC B4



R.K. Tyagi  
GM, Powergrid  
Chairman CIGRE NSC A3



B.N. De Bhomick  
GM, Powergrid  
Chairman CIGRE NSC C3



Anish Anand  
GM, Powergrid  
Chairman CIGRE NSC B2



Ashok Pal  
GM, Powergrid  
Chairman CIGRE NSC C1



Rajil Srivastava  
AGM, Powergrid  
Chairman CIGRE NSC B3



N.S. Sodha  
Ex. ED, Powergrid  
Chairman CIGRE NSC D2



D.K. Chaturvedi  
AGM, NTPC  
Chairman CIGRE NSC A1



Subhas Thakur  
AGM, NTPC  
Chairman CIGRE NSC B5



Lalit Sharma  
COO, KEI  
Chairman CIGRE NSC B1

# CIGRE SC Meetings Organized and Planned in India

## CIGRE Meetings organized in Year 2014 - 2017

**CIGRE SC D2 on  
Information &  
telecommunications**

**CIGRE SC B4 on  
HVDC**

**CIGRE SC B1 on  
Insulated cables**

## CIGRE Meetings being held in 2019

**SC A1  
(Rotating Electricals Machines  
22-28 Sept. 2019  
New Delhi**

- **SC A2 (Transformers);**
- **SC B2 (Overhead Lines) &  
• SC D1 (Materials)  
18-23 Nov. 2019, New Delhi**

## Meetings Planned to be hosted in 2021

- **SC A3 – High voltage equipment;**
- **SC B3 - Substation;**
- **SC B5 - Power System Protection;**
- **SC C2 – System Operation;**
- **SC C5 – Markets & Regulations;**



# Available Seats in Steering Committee of CIGRE:

12 by membership + 3 by election

Seats	For Europe		For America		Africa & Middle east		Pacific & Asia	
12	6		2		1		3	
	UK	718	Brazil	1081	GCCNC	208	China	1041
	Russia	683	US	806			Japan	802
	Germany	669					Australia	554
	France	568						
	Switzerland	408						
Italy	337							

Based on Membership India is likely to get seat in Steering Committee during session 2018

# Membership Growth

Category	2016		2017		2018	
Collective 1	69X6	<b>414</b>	91X6	<b>546</b>	66X6	<b>396</b>
Collective 2	11X3	<b>33</b>	19X3	<b>57</b>	15X3	<b>45</b>
Individual	152	<b>152</b>	151X1	<b>151</b>	151X1	<b>151</b>
Young	24X0.5	<b>12</b>	28X0.5	<b>14</b>	28X0.5	<b>14</b>
Total		<b>611</b>		<b>768</b>		<b>606</b> <b>So far</b>

**The Ambitious Plan for achieving the target for membership of 1000 in the year 2018.**

## CIGRE Membership 2018 - Renewal Pending

POWERGRID - 4 nos	<b>Other Organisation – 15 Nos.</b> <ul style="list-style-type: none"><li>• Bajaj Electricals Ltd</li><li>• Hyosung T &amp;D India pvt. Ltd</li><li>• The Tata Power Company Ltd</li><li>• Cargill India Pvt. Ltd.</li><li>• Sterlite Power Transmission Ltd.</li><li>• Amitasha Enterprises Ltd.</li><li>• EMC Ltd</li><li>• Gupta Power Infrastructure Ltd.</li><li>• Omicron Energy Solution Pvt. Ltd.</li><li>• Siemens Ltd.</li><li>• Switchgear &amp; Structural (I) Pvt. Ltd.</li><li>• Supreme &amp; Company Private Limited</li><li>• Tata Power Delhi Distribution Limited</li><li>• The India Fruits Pvt. Ltd.</li><li>• Toshiba T &amp; D Systems (I) Pvt Ltd</li></ul>
NTPC - 10 Nos	
BHEL - 3 Nos.	
BBMB	
Maharashtra Electricity Trans. Co. Ltd.	

**We request these organizations to kindly expedite renewal of their membership**

# Why it is beneficial to join CIGRE activities?

- **Access to over 9,000 latest CIGRÉ technical reports.**
- **Receipt of Bimonthly journal, ELECTRA, with technical articles and reports.**
- **Opportunities to participate & present papers at CIGRE sessions held at PARIS on discounted registration fee.**
- **Opportunity to participate in CIGRÉ working groups and study committees, which include about 2,000 experts.**
- **Association with worldwide network of experts which will result in accentuation of knowledge and high return for your organization.**
- **Access to CIGRÉ's membership directory – available on CD-ROM – provides a link to all members and is an essential tool for extending professional contacts.**

# MEMBERSHIP CATEGORY & FEES

<b>Category</b>	<b>Annual Fees (Rs.) excluding GST</b>
<b>Collective Members (I) (Companies of industrial and commercial nature)</b>	<b>65,000.00</b> <b>6 members get benefit of discounted fee for CIGRE Session</b>
<b>Collective Members (II) (Universities, Engg. Colleges and Tech. Inst. &amp; Regulatory Commissions)</b>	<b>25,000.00</b> <b>3 members get benefit of discounted fee for CIGRE Session</b>
<b>Individual Members</b>	<b>7,500.00</b>
<b>Young Members (Below 35 Years Of Age)</b>	<b>3,750.00</b>



# **CIGRE SESSION 2018**

## **26-31 August 2018 Paris**

- **Synopsis Reviewed by CIGRE India - 150**
- **Synopsis Submitted from India - 30**
- **Participants Registered - 144**
- **Total participants including Accompanying Persons & Exhibitors = 200 Nos**

### **Exhibitors from India :**

- **Scope T&M - Stand No. 168**
- **CTR Manufacturing Co. - Stand No. 125**
- **KalkiTech - Stand No. 131**
- **Karamtara Engineering Pvt. Ltd - Stand No. 276**
- **KSE Electricals - Stand No. 241**
- **Tag Corporation - Stand No. 169**

# PROGRAMME - CIGRE SESSION-2018

## SOCIAL EVENTS

## LOCATION

Sunday 26 August	17:00 - 18:30	Welcome drinks for opening ceremony - <b>Attendees only!</b>	Level 1
Monday 27 August	18:00 - 20:00	Cocktail dinner	Level 1, 2 & 3
Monday to Friday	AM & PM	Coffee breaks will be held each mid-morning and mid-afternoon	
Thursday 30 August	19:30 - 23:00	Cocktail dinner at "Cité de la Mode et du Design" For fully registered delegates and companions - Invitations to be collected at the "Delegate's Reception Desks"	34, quai d'Austerlitz 75013 Paris

## TECHNICAL EXHIBITION

## LOCATION

Monday	9:00 - 20:00	For more details on the technical exhibition: <a href="http://www.cigre-exhibition.com">www.cigre-exhibition.com</a>	Level 1, 2 & 3
Tuesday to Thursday	9:00 - 18:00		
Friday	9:00 - 16:00		

## ASSOCIATION MEETING

Monday 27 August	13:15 - 14:15	Presentation of the results of the General Assembly of June 30, 2018
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# PROGRAMME-CIGRE SESSION-2018

## OPENING CEREMONY

			ROOM	LEVEL
Sunday 26 August	16:00	<b>Opening Ceremony:</b> <ul style="list-style-type: none"> <li>▶ CIGRE President Opening Speech</li> <li>▶ Keynote Speaker: Mrs. Audrey ZIBELMAN, CEO, Australian Energy Market Operator</li> </ul> <b>Future electricity markets and business models</b>	Grand Amphithéâtre	0
		▶ Welcome drinks	Hall Ternes	1

## TECHNICAL MEETINGS SCHEDULE

Monday 27 August	8:45 - 12:00	<b>Opening Panel:</b> The future sustainable power system: organic, disruptive and secure	Grand Amphithéâtre	1	
	14:30 - 18:00	<b>Workshop - Large Disturbances:</b> <b>Part 1:</b> Market disturbances <b>Part 2:</b> System disturbances	Bleu	2	
		<b>NEW</b> <b>Conference:</b> Integrated power system: changing from consumers to prosumers	Grand Amphithéâtre	1	
14:30 - 18:00	Poster Sessions A1 & B4	Hall Ternes	1		
Tuesday 28 August	8:45 - 18:00	<b>GDM</b>	<b>A1:</b> Rotating electrical machines	Havane	3
			<b>B4:</b> HVDC and power electronics	Grand Amphithéâtre	1
			<b>C4:</b> System technical performance	Bordeaux	3
			<b>C6:</b> Distribution systems and dispersed generation	Bleu	2
	9:00 - 12:30	Poster Sessions A3 & B5	Hall Ternes	1	
14:30 - 18:00	Poster Sessions C5 & D1	Hall Ternes	1		

# PROGRAMME-CIGRE SESSION-2018

Contd...

Wednesday 29 August	11:00 - 14:00	◆	<b>Next Generation Network Forum</b>	342A	3
	8:45 - 18:00	GDM	<b>A3:</b> High voltage equipment	Bordeaux	3
			<b>B5:</b> Protection and automation	Grand Amphithéâtre	1
			<b>C5:</b> Electricity markets and regulation	Havane	3
			<b>D1:</b> Materials and emerging test techniques	Bleu	2
	14:00 - 15:30	◆	<b>B4 &amp; CENELEC Workshop:</b> System aspects of HVDC grids		
9:00 - 12:30	◆	Poster Sessions A2 & B3	Hall Ternes	1	
14:30 - 18:00	◆	Poster Sessions C2 & D2	Hall Ternes	1	
Thursday 30 August	11:00 - 14:00	◆	<b>CIGRE Women in Engineering Forum</b>	342AB	3
	8:45 - 18:00	GDM	<b>A2:</b> Transformers	Bleu	2
			<b>B3:</b> substations	Grand Amphithéâtre	1
			<b>C2:</b> System operation and control	Bordeaux	3
			<b>D2:</b> Information systems and telecommunications	Havane	3
	15:30 - 17:00	◆	<b>A3 &amp; B4 Workshop:</b> DC circuit breakers		
9:00 - 12:30	◆	Poster Sessions B1 & C1	Hall Ternes	1	
14:30 - 18:00	◆	Poster Sessions B2 & C3	Hall Ternes	1	
Friday 31 August	9:00 - 12:00	◆	<b>B3 Workshop:</b> Safe working in substations		
	8:45 - 18:00	GDM	<b>B1:</b> Insulated cables	Bleu	2
			<b>B2:</b> Overhead lines (morning)/Joint B2 & C3 (afternoon)	Grand Amphithéâtre	1
			<b>C1:</b> System development and economics	Bordeaux	3
	9:00 - 12:30	◆	<b>C3:</b> System environmental performance	Havane	3
9:00 - 12:30	◆	Poster Sessions C4 & C6	Hall Ternes	1	

# PROGRAMME-CIGRE SESSION-2018

## TUTORIALS

Monday 27 August	8:30 - 10:20	<b>B5:</b> Challenges and solutions for the maintenance of fully digital substation
	10:40 - 12:30	<b>B4:</b> HVDC planning, technology selection and specification
	14:00 - 15:50	<b>A2:</b> Transformer ageing, failures, and forensics
	16:10 - 18:00	<b>D2:</b> Framework for EPU operators to manage the response to a cyber-initiated threat
Tuesday 28 August	8:30 - 10:20	<b>C1:</b> CIGRE feasibility study of a global electricity network
	10:40 - 12:30	<b>D1:</b> Guidelines for altitude correction of pollution performance of insulators
	14:00 - 15:50	<b>A3:</b> Switching equipment
	16:10 - 18:00	<b>C5:</b> Global overview of demand response markets and regulations
Wednesday 29 August	8:30 - 10:20	<b>C4:</b> Recent advances in the application of synchrophasor technology
	10:40 - 12:30	<b>C2:</b> System operation emphasising DSO/TSO interaction and co-ordination
	14:00 - 15:50	<b>C6:</b> Application of battery storage systems in distribution systems
	16:10 - 18:00	<b>B3:</b> Contemporary cost-effective substation design
Thursday 30 August	8:30 - 10:20	<b>B2:</b> Experience with the mechanical performance of non-conventional conductors
	10:40 - 12:30	<b>A1:</b> Revisiting the fundamentals of magnetic saturation
	14:00 - 15:50	<b>B1:</b> Fault location on land and submarine links
	16:10 - 18:00	<b>C3:</b> EMF - time to reassure



# Indian Evening for Networking and Dinner on 29<sup>th</sup> August 2018 at Hotel Hyatt, Paris

- CIGRE India is organizing an Indian Evening for Networking and Dinner on 29<sup>th</sup> August 2018 at 19:30 PM in the Hyatt Regency Paris Etiole, next to Palais de Congress, the venue of CIGRE Session.
- About 200 participants including Steering Council, Technical Council, Key experts as also the office bearers of CIGRE (Paris) are expected to Participate.

## Sponsoring Organizations :

ABB	Secure Meters
Raychem	CTR manufacturing Cos.
Taurus Powertronics	CESC

**The support from Other Organisations is Welcome**

# Thank You

For details pl. Contact : [cbip@cbip.org](mailto:cbip@cbip.org);

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[www.CIGREindia.org](http://www.CIGREindia.org)