



Association Grand Projects

## Workshop TGEG'18

# Technologies for Global Energy Grid

Organization: Association Grand Projects'21- AGP'21

President: Lucien Deschamps

With Technical and Scientific support of:



CIGRE, International Council on Large Electric Systems,  
Jicable, International Conference on Insulated Power Cables

SEE, Society of Electricity, Electronics and Information Technologies and Communication

**Wednesday, 29 August 2018 - 9:00 am to 5:00 pm**

Palais des congrès de Paris, Room 341  
2 place de la Porte Maillot, 75 017 Paris

### Program

**André Merlin** : Chairman Workshop TGEG'18

**Gerald Sanchis** : Workshop Coordination

L: Lecture    SI: Short Intervention

### 8:45 Welcoming participants

### 9:00 Opening Ceremony

**André Merlin**, Past President CIGRE, Former Founding President RTE, AGP'21

### Session 1 : Global electricity network feasibility

9:15 – 10: 45

**Chairman: André Merlin**, Past President CIGRE, Former Founding President RTE, AGP'21

**Rapporteur: Gerald Sanchis**, RTE, Convener CIGRE, WG C1.35, France.

- 1.1 L: Global electricity network feasibility study, Presentation of the results of the CIGRE C1.35 working group.  
by **Gerald Sanchis**, RTE, Convener WG C1.35
- 1.2 SI: HVDC Technology key issues for energy grids  
by **Marcio Szechtman**, CEPEL – Brazilian Power Research Centre, Brazil
- 1.3 SI: European infrastructure. Supergrid for 2050,  
by **Spyros Chatzivasileiadis**, DTU, University Technical of Denmark, Denmark
- 1.4 SI: Multinational power system interconnection from INGA (DRC),  
by **Beleke Tabu Leonard**, Betec Sarl, RD Congo
- 1.5 SI: Sahara Wind-HVDC project's integrated access to the North Atlantic trade winds,  
by **Khalid Benhamou**, Sahara Wind, Morocco,
- 1.6 SI: The Mediterranean Master Plan Consolidating a Secure and Sustainable Electricity Infrastructure in the Mediterranean Region,  
by **A. Ferrante**, Med-TSO, **C. Sabelli**, TERNA, **E. Bué**, RTE, **M. Paun**, Med.-TSO, CIGRE, Study Committee C1: Power system development and economics.

### Coffee break from 10:45 to 11:00

## Session 2. Keynote

11:00 – 11:30

**Chairman:** Jean Kowal, ex Medgrid and CIGRE, France

**Rapporteur :** Petru Notingher, Université de Montpellier 2, CNRS, France

### 2.1 L: Technologies for the Global Energy Grid

by Mingli Fu, Electric Power Research Institute of China Southern Power Grid, China

## Session 3: Insulated Power Cables

11 :30 – 12 :45

**Chairman:** Ray Awad, Independent Consultant, Canada

**Rapporteur:** Gilbert Teysse, Laplace, Université Paul Sabatier, Toulouse, France

### 3.1 L: Superconducting cables: status and drivers for market penetration

by Jean-Maxime Saugrain, Nexans, Machines, Cryogenics & Superconductors VP

### 3.2 L: State of the art and new technologies AC & DC of insulated cable systems, and submarine cables

by Stefano Cotugno, Prysmian PPL, Italy

### 3.3 SI : HVDC Superconducting MgB<sub>2</sub> cables: Best paths EU project

by Christian-Eric Bruzek, Nexans, France

### 3.4 SI : Superconducting transmission lines

by Timofey Rjabin, R&D Center FGC UES, Russia

## Lunch break from 12:45 to 13:45 taken on site.

## Session 4: Overhead power lines

13:45 – 14:30

**Chairman :** Jose Henrique Machado Fernandes, Independent Consultant, Brazil

**Rapporteur:** Bernard Dalle, BMD - Consulting, France

### 4.1 L: A situation of the state of the art and the innovations of the overhead electric power lines, in Brazil

by Carlos Alexandre M. do Nascimento, CEMIG, Brazil

## Session 5. Advanced technologies, innovation

14:30 – 15:15

**Chairman:** Timofey Rjabin, R&D Center FGC UES, Russia

**Rapporteur :** Olivier Boisard, Olivier Boisard Conseil, Ecole Centrale Lille, France

### 5.1 L: Factors for Investment decision GIL-Cable. Conclusion report on CIGRE TB 639

by Hermann Koch, Siemens, Erlangen, Germany

### 5.2 SI: Superconductivity (current) associated with Liquid H<sub>2</sub>

by Christian-Erik Bruzek, Nexans, France

## Coffee break from 15:15 to 15:30

## Session 6. Storage

15:30 – 16:15

**Chairman:** Khalid Benhamou, Managing Director, Sahara Wind, Morocco

**Rapporteur :** Pierre Denuelle, Feeding, France

### 6.1 L: A Survey of Energy Storage Technologies

by Robert B. Tanner, Nature and People First LLC, USA

### 6.2 SI: Case Study of Energy Storage

by Danny Junghyun Kim, Hyosung Corporation, Korea

**Session 7. Financial and Regulatory Aspects**

16:15 – 17:00

**Chairman:** **Beleke Tabu Leonard**, BETEC sarl, RD Congo

**Rapporteur:** **Jacques Horvilleur**, SEE, France

**7.1 L: Aspects Financial and Regulation**

by **Jean Kowal**, ex Medgrid and CIGRE, France

**17:00 – Closing of the Workshop**

by **André Merlin**, Chairman, Workshop TGEG'18