Organization: Association Grand Projects'21- AGP'21 –
President: Lucien Deschamps

Technologies for Global Energy Grid
TGEG'18

Wednesday August 29th 2018

Chairman: André Merlin, Past President CIGRE, Former Founding President RTE
Coordination: Gerald Sanchis, RTE, Secretary Group CIGRE C1-35

Introduction

The concept of a global power grid was introduced in the 1980s, with the development of the DC network, but real studies began in the late twentieth century. In 2003, on the occasion of Jicable'03, a workshop was organized to examine the interest and feasibility of a global energy network.
The global electricity network aims to interconnect power grids between regions and continents, allowing anywhere, anytime to optimize the exploitation of resources, particularly renewable ones, and to meet.
In 2016, the International Council of Large Electric Networks (CIGRE) launched a working group to carry out a feasibility study involving network specialists from all continents on technical challenges, potential benefits, economic viability, energy policies and the environmental impact of implementing a global electricity grid. The results of this study will be presented end of August 2018.
This presentation will present the current situation where the electrical interconnections between continents are practically non-existent, and the techno-economic arguments for an interconnection of continents imagined by 2050
The present TGEG'18 workshop organized by the AGP'21 association will explore current and prospective technologies for the development of a future World Energy Grid. This workshop is sponsored by CIGRE, SEE and Jicable.

This workshop would aim to take stock of the *Technologies of a Global Energy Grid:*

1. ***Global electricity network feasibility study***, Presentation of the results of the CIGRE C1.35 working group.
   by Gerald Sanchis, RTE, Convener WG C1.35
2. ***Technologies for the Global Energy Grid***.
   by Mingli Fu, Electric Power Research Institute of China Southern Power Grid, China
3.1 ***Superconducting cables: status and drivers for market penetration***
   by Jean-Maxime Saugrain, Nexans, Machines, Cryogenics & Superconductors VP
3.2 ***State of the art and new technologies AC & DC of insulated cable systems and submarine cables.***
   by Prysmian, Stefano Cotugno, Prysmian PPL, Italy
4. ***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
5. ***Factors for Investment decision GIL-Cable***, Conclusion report on CIGRE TB 639
   by Hermann Koch, Siemens, Erlangen, Germany
6. ***A Survey of Energy Storage Technologies***
   by Robert B. Tanner, Technical Adviser, Nature and People First LLC, USA
7. ***Financial aspects and regulation***
   by Jean Kowal, ex Medgrid and CIGRE. France

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