Best Practice in Transmission and Distribution in a Changing Environment

International Symposium

Auckland (New Zealand) – September 16 - 17, 2013

Organized by CIGRÉ Technical Committee in cooperation with
CIGRÉ National Committees of Australia and New Zealand
Leading Study Committees: A3 and B2
Supporting Study Committees: A2, B1, B3, C6 & D1

CONFERENCE VENUE

Auckland has ready access for international travel and many options for seeing New Zealand. Surrounded by the sea it is known as the City of Sails. Auckland with 1.4 m people is New Zealand’s largest city (31% of NZ’s population) and has the largest Polynesian population of any city in the world. The 2011 Mercer Quality of Living Survey ranked Auckland 3rd equal place in the world on its list, The Economist's World's Most Livable Cities index of 2011 ranked Auckland in 9th place. In 2010, Auckland was classified as a Beta World City in the World Cities Study Group’s inventory by Loughborough University. The Symposium will take place at the coveted Skycity Convention Centre, only a short walk to the cafes, restaurants and clubs of the popular Viaduct Basin.

BACKGROUND AND SCOPE

Electric power networks are the backbone of all modern infrastructures and they contribute greatly to the welfare and progress of mankind. Despite that, in today's pluralistic societies they are facing in a number of challenges. On one hand there is a big demand for network expansion, not only in developing countries but also in industrial countries, where the majority of the network components have reached the end of their useful life and additionally because of the strong commitment in many countries to “renewables”. On the other hand, there is increased concern by the public in accepting this new infrastructure.

This ambiguity can and will be met by exploiting the best practices in designing, building, maintaining and operating the transmission and distribution networks, which is exactly the main theme of this Symposium. In particular the following subjects will be addressed:

• How can existing transmission and distribution infrastructure be best utilized? Which are the most promising approaches for lifetime estimation including monitoring, asset management and maintenance techniques? Which are the best practices and reference projects for upgrading and uprating transmission and distribution assets?

• What is the role of new technologies in particular for overhead lines, HV equipment, substations and underground cables?

• How does the environment influence design, operation and maintenance of networks and their components? How are atypical weather conditions, like seismic activity, hurricanes, heavy rains, extreme humidity and pollution best considered?

• How can the new requirements from increasing distributed generation like stability, storage, intermittence etc. be met? What is the future role of combined AC-DC networks?

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http://www.cigre.org
The Symposium is aimed at transmission, distribution and generation owners, system operators, suppliers, designers, traders, regulators, research laboratories and universities.

### PROGRAM

The Symposium will be held over 2 days and includes:

- Panel Sessions with invited speakers will discuss best practices in transmission and distribution with emphasis on T&D Lines, HV&MV equipment, Underground Cables and Substations;
- Paper sessions during which authors will present their papers and then participate in a general discussion;
- Tutorials on key technical issues presented by international experts; and
- Optional technical visits (186 km 400 kV double circuit line with underground cable sections into Auckland, Pakuranga, Brownhill Road and Otahuhu substations, UG to OHL conversion of the ALB-HEN A line etc).

### MAIN TOPICS

1. Extreme weather and environmental conditions (heavy rain, humidity, seismic, etc.)
2. Lifetime management, asset management, maintenance techniques
3. Upgrading and uprating of Transmission and Distribution assets
4. HV and MV equipment
5. New requirements for combined AC-DC networks
6. Distributed generation issues (storage, stability, etc.)

### SUBMISSION OF SYNOPSES

Participants wishing to present papers are invited to submit their abstract in ENGLISH (500 words) to the Central Office of CIGRE before

30th October 2012

to:

sylvie.bourneuf@cigre.org

Each abstract must indicate the topic(s) that will be addressed. The name, title, company affiliation, email and full address of the author(s) should also be provided.

### LANGUAGES

The papers must be written in English.

### PARTICIPANTS

### COMMITTEES

**TECHNICAL COMMITTEE**
Chaired by
Konstantin Papailiou (SC B2) and Hiroki Ito (SC A3)

Francois Meslier CIGRE Secretary General
Claude Rajotte SC A2
Pierre Argaut SC B1
Terry Krieg SC B3
Nikos Hatziargyriou SC C6
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Robert Lake SC B2 & Australia NC
Peter Vukovic SC A3 & New Zealand NC

**LOCAL ORGANIZING COMMITTEE**
Chaired by Ray Brown (NZNC) and Robert Lake (ANC)

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Claude Rajotte SC A2
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Terry Krieg SC B3
Nikos Hatziargyriou SC C6
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Peter Vukovic SC A3 & New Zealand NC

**PUBLICATION OF PAPERS**

The papers will be available for uploading from the CIGRE Website before the Symposium for all registered participants.

The papers will also be available for purchase on electronic format from the CIGRE Central Office, after the Symposium.

A report on the Symposium will be drafted after the Symposium. It will be published in ELECTRA and posted on the CIGRE website.

### REGISTRATIONS

The General program of the Symposium will be issued in April 2013, with all the relevant information: technical program, registrations, and accommodation.

Further information on the Symposium will then be found on www.cigre.org.

### DEADLINES

Authors are kindly requested to take note of the following deadlines:

Receipt of abstracts: 30th October 2012
Notification of acceptance: 30th December 2012
Receipt of full papers: 15th April 2013