

Corona Times

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EDITION 15



empowering
networking
globalknow-how

CORONA: "a luminous, audible discharge brought on by the ionization of a fluid such as air surrounding a conductor that is electrically charged".



A FORTNIGHTLY NEWS-SHEET TO PROVIDE INFORMATION AND UPDATES TO CIGRE MEMBERS

TECH TALK

A series of links to CIGRE Technical documents

Shunt capacitor switching in distribution and transmission systems - TB817

The performance of switchgear for capacitor banks in service is compared with their performance during type testing. A survey interrogated capacitor size, switching rates and maintenance practices. For SF6 and vacuum devices, state-of-the-art was collected on the probability of restrikes in relation to inrush current and frequency aiming on electrical endurance. Alternative devices are described and peculiarities of filter bank switching.

Sag-Tension calculation methods for overhead lines - TB324

This brochure identifies and describes the most essential elements of the sag-tension calculation process and the various mathematical and experimental methods used to predict sag and tension of catenaries over the whole range of conductor temperatures and ice and wind loads: the goal is not to develop a unique calculation method but to provide the engineers with a basic explanation of the sag-tension calculation methods that are in common use throughout the world and with a physical understanding of the processes and mathematical relationships that underlie these methods.

WEBINAR - FREE

FUTURE THREATS AND IMPACT ON ORGANIZATIONS AND OPERATIONS - AN OVERVIEW (TB 762 & 796) WBN020

This Webinar describes the security requirements for remote services to access intelligent electronic devices on an electric power utility's operational network. A model-based system engineering methodology based on Zachman's lifecycle framework is used to assess the risks and potential means to mitigate these risks. The Webinar stresses the need to combine role-based and attribute-based access control to protect the integrity and confidentiality of the sensitive data. If sensitive data is compromised, a trusted platform is needed to securely collect and safeguard the evidence needed for forensic analysis.

Power quality trends in the transition to carbon-free electrical energy systems - RP308_2

Due to the accelerated shift towards a carbon-free electrical energy system, the power system is changing in terms of both planning and operation with an increasing integration of converter-interfaced renewable generation at all voltage levels. One area strongly affected by these changes is power quality where, if not managed correctly, it can result in equipment mis-operation, accelerated aging, tripping of plant, loss of production process, etc.

NGN CORNER

News from our Young Engineer Group (U 35yo)

We are pleased to announce that Phil Coughlan will be the incoming Co-Chair for 2021. Phil has been an integral part of the team at CIGRE Australia for many years, initially Secretary of the ATC, before transitioning to B1 NGN Liaison this year. Phil's enthusiasm and collaborative nature has resulted in great outcomes for the group and we look forward to his contribution to the Co-Chair role over the coming years. *Congratulations Phil !*

If you have any suggestions on how we can continue to make exciting content, please contact us at ngn@cigreaustralia.org.au

KIWI COMMENTS

News from across the ditch

CIGRE NZ B5 Protection Automation and Control Panel start-up one day Workshop 19th November. NZ distribution companies will share experiences and development in their industry. Supported by Peter Bishop, Transpower & Convenor of AUB5 Panel. Further information will be available **here** from Friday 6th November.

QANTAS takes to the Air !

Thursday, November 2, 1922. : Qantas (Queensland and Northern Territory Aerial Services.) establishes its first regular passenger air service between Charleville and Cloncurry.



CORONA PANEL SNAPSHOT | AU-C6

Active Distribution Systems & Distributed Energy Resources

Study Committee Chairman: Christine Schwaegerl (DE) | **AU Panel Convener:** Ray Brown

Scope:

The scope of Study Committee C6 is the technology, integration and operation of distributed energy resources and the associated active distribution systems. To analyse the different approaches and solutions and to assist various players in distribution systems make DER more controllable and responsive (active distribution systems with enabled customer involvement) and enhance the role of the distribution system operator and its distribution management system.

SC C6's principal areas of interest are:

- Enabling technologies
- Innovative solutions for DER
- Storage technologies
- New approaches to configure distribution systems
- Consumer integration & empowerment
- Smart cities
- Rural electrification

Working Groups

Active working groups led by C6 are:

WG C6.28	Hybrid systems for off-grid power supply
JWG C6/C1.33	Multi-energy system interactions in distribution grids
JWG C6/C2.34	Flexibility provision from distributed energy resources
WG C6.35	DER aggregation platforms for the provision of flexibility services
WG C6.36	Distributed energy resource models for impact assessment
JWG C6/B4.37	Medium voltage DC distribution systems
WG C6.38	Rural electrification
WG C6.39	Customer empowerment
WG C6.40	Electric vehicles

Recent Publications

There have been two new technical brochures published by C6 working groups in the last year. As

for all technical brochures, these are free to download for CIGRE members from e-cigre.

[TB 782 Utilization of Data from Smart Meter System](#) was published in October 2019 and was produced by Joint Working Group C6/D2.32, convened by Yasuo Matsuura of Japan. It is 89 pages in length and included a survey of smart metering practices.

[TB 793 Medium voltage direct current \[MVDC\] grid feasibility study](#) was published in February 2020 by Working Group WG C6.31, led by Zhao Ma of China. The working group carried out a survey and collected case studies of recent MVDC projects around the world. While there are a number of benefits in using MVDC, it seems that the lack of practical, low-cost circuit breakers for MVDC voltages is a significant constraint.

CIDER

The Conference on the Integration of Distributed Energy Resources (CIDER) is organised by Australian Panel C6 and is held every second year in various cities around Australia. It was first held in Brisbane in 2015, then Sydney in 2017 and Melbourne in 2019 and extends for two days.

CIDER was created as a practical conference focusing on the integration of DER in relation to distribution network connection. It aims to promote sharing of knowledge and best practice within the Asia Pacific region and concentrates on identifying cost-effective technical solutions to address the associated challenges and opportunities.

The conference includes a technical exhibition where delegates can have direct interaction with vendors and service providers during the session breaks. The conference will also include a social function and stand-up dinner on the first evening. The format of the social event provides a great opportunity for further industry networking. A CIGRE Next Generation Network (NGN) event will be held on the first afternoon.

CIDER will be held at the Stamford Grand in Glenelg SA on 2nd & 3rd November, 2021.

KMS Tips & Tricks

Want to find another user on the KMS? - <<People>> on the menu bar opens the People Directory showing all KMS Users (uses partial first or last name * wild card search).

To find a space - <<Space name>> at the top of the Space navigation pane will take you to the Space Home page.