

Corona Times

31st MAY 2022
EDITION 32



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 MONTHLY NEWS-SHEET TO PROVIDE INFORMATION AND UPDATES TO CIGRE MEMBERS

TECH TALK

A series of links to CIGRE Technical documents



RECOMMENDATIONS FOR MECHANICAL TESTING OF SUBMARINE CABLES FOR DYNAMIC APPLICATIONS - TB862

There has been significant development of the floating wind technology and floating wind is expected to grow fast in the future. This technology requires the use of dynamic cables that must be able to withstand the reoccurring motions induced by the floating device during its service life. The technical brochure written by WG B1.63 describes the design of the dynamic cable system, including the type of analysis that are performed as part of the design process. The brochure covers the test sequence for a dynamic cable with a special focus on the mechanical tests that are specific for a dynamic cable, for instance the full-scale fatigue test.



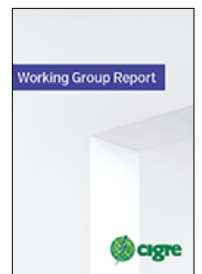
MULTI-ENERGY SYSTEM INTERACTIONS IN DISTRIBUTION - TB863

Multi-energy systems couple various energy sectors and networks such as electricity, gas, heating, cooling, transport, water, waste, etc. to unlock energy flexibility and provisions for cost-effective operation while realizing low-carbon smart electricity grids. These systems are the key for generating new types of energy flexibility as well as techno-economic and environmental opportunities for the future complex energy system.



RESILIENCE OF INTERDEPENDENT CRITICAL INFRASTRUCTURE - WGR_320_1 2021

This paper discusses the resilience of power systems in the context of other interdependent critical infrastructure systems. Potential sources of disruption are explained, and their interconnected impacts are discussed. The theoretical frameworks for assessing reliability and resilience across electricity, gas, water, telecommunications and transport networks are presented, and a new approach is proposed for integrating these approaches into a unified resilience assessment framework.



WEBINARS - FREE



MOISTURE MEASUREMENT IN INSULATING FLUIDS AND TRANSFORMER INSULATION - AN EVALUATION OF SOLID STATE SENSORS AND CHEMICAL METHODS

This tutorial deals with possibilities and restrictions for convertibility between absolute water content determined by means of Karl Fischer titration method and relative saturation measured using capacitive sensor for different insulating liquids, as well as with the uncertainties of such conversions. It is shown that it is possible to derive evaluation criteria for on-line monitoring of moisture in electrical equipment based on the correlation between dielectric strength and relative moisture saturation in a dielectric liquid.

NGN CORNER

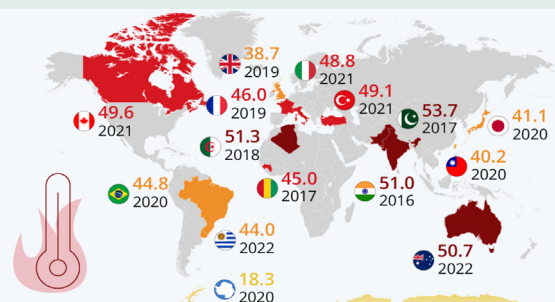
News from our Young Engineer Group (U 35yo)

MENTORING PROGRAM

The mentor program kicked off in March and there are 9 mentor/mentee pairings participating. All mentores and mentees have attended a kick-off session with CIGRE Australia. It is now up to individuals to determine a schedule of engagement that suits them. We will be seeking feedback over the next few months and then schedule the next intake of participants.

WORLD SEES RECORD HEAT WAVES

Selection of temperature records by country (or continent) recorded during the last five years in °C.

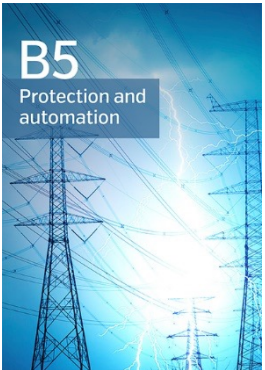


* As of May 3, 2022.

Sources: World Meteorological Organization, media reports, Statista research



INDUSTRY PROTECTION WEBINAR - FREQUENCY PROTECTION DOWN UNDER - NEW CHALLENGES



CIGRE Australia and the B5 (Protection and Automation) panel is offering this free online webinar on **Wednesday 15th June**.

The Webinar will offer some topical insight and discussion into the subject of frequency protection challenges in the Australian environment. It particularly relates to the challenges of under frequency load shedding (UFLS) in the presence of embedded solar generation. Recent power system events have highlighted existing challenges and several utilities are working on protection and automation solutions.

The speakers and topics for this event are:

Callide Event and Associated Under Frequency Load Shedding (May '21)

Presented by **Gavin Lee - Senior Engineer Protection Systems (Powerlink)** and **Bruce Capstaff - Principal Engineer Protection (Powerlink)**

Under Frequency Load Shedding Challenges in Queensland

Presented by **Rebecca Harvey - Lead Engineer - Regulatory and Emerging Technology, Network Operations (Energy Queensland)**

Under Frequency Load Shedding Upgrade - Design Considerations and Lessons Learned

Presented by **Khang Dang - Principal Engineer, Western Power**

Dynamic Arming of Under Frequency Load Shedding

Presented by **Boris Celic - Secondary Systems Planning Manager at SA Power Networks**



Australian Technical Panel Presentations:

These can now be found on our [YouTube](#) channel and summarise the work being carried out in each of our 16 Technical fields of work.

e-cigre: The go to site for all CIGRE documentation and Technical Brochures.

Through e-cigre you can search the vast technical database of 14,000 + items, order Green books or view a range of Webinars and search for past Electra editions.

<https://e-cigre.org/>



COLLECTIVE MEMBERS PROFILE



FORTESCUE FUTURE INDUSTRIES



Fortescue Future Industries (FFI) is a global green energy company committed to producing zero-carbon green hydrogen from 100 per cent renewable sources.

Green hydrogen is a zero-emission fuel, that when used produces nothing but water. It is the practical and implementable solution that will help revolutionise the way we power our planet: decarbonising heavy industry and creating jobs globally.

FFI is leading the green industrial revolution, developing technology solutions for hard-to-decarbonise industries, while building a global portfolio of renewable green hydrogen and green ammonia projects to produce 15 million tonnes per year of green hydrogen by 2030, rising to 50 million tonnes per year in the decade thereafter.

FFI is also leading the world effort to decarbonise hard-to-abate sectors and is responsible for the decarbonisation of one of the biggest resources companies in the world by 2030 - our parent company Fortescue Metals Group.

[CLICK HERE](#) for Information.

www.ffi.com.au

This Member summary is provided as general information and is not an endorsement of the members services or products.