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Reference: **SESSION\_2022\_B3**

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Type:

**Session Materials**

Title:

**Session 2022 - SC B3 Package**

[Session registration account](#)

## Contents:

### Videos

#### General

- Opening Ceremony
- Opening Panel
- Next Generation Network forum
- Women In Energy forum (2 videos)

#### SC B3

- Group Discussion Meeting 1
- Group Discussion Meeting 2
- Workshop A3/B3 - SF6 alternatives
- Workshop B3
- Tutorial WG B3.48 - Asset health indices for substation equipment

### Documents PDF

### Session Papers & Posters

- **10107** Health and safety assessment of an SF6-alternative gas technology
- **10139** New Electrical Automation Engineer Profile and Curriculum
- **10140** Use of Additive Manufacturing in the Maintenance of Static Compensator
- **10188** Data Sources for Machine Learning Applications in IEC 61850-based Digital Substations
- **10189** Results and Lessons Learned from Early Adopters of BIM Technology for Substation Design
- **10192** ComEd's Experience with IEC 61850 at a Digital Smart Substation
- **10194** Semi-Autonomous Robot for Medium-Voltage Switchgear
- **10207** Resilient Cyber Secure Centralized Substation Protection
- **10208** Substation-based Waveform Analytics Monitoring System for Improved Circuit Awareness
- **10210** Using BIM Technology to Promote the Sustainability of Electrical Substation Projects
- **10258** Short-circuit Currents Management at Hydro-Quebec Upgrading Versus Limiting Solutions Study
- **10259** Condition Assessment of Substation Apparatus - The Challenges of Turning Dreams into Reality
- **10284** Practical Machine Learning Applications
- **10288** Lessons from Action Planning Based on Transformer Condition Monitoring
- **10313** Research and Judgement on Technical Development Trend of Substation Secondary System in China
- **10315** Panoramic perception of substation equipment and smart maintenance technology
- **10318** Reliability Management Strategy for Power Systems Maintenance free
- **10319** Application of Substation Asset Health Management System(AHMS) for a Utility in Mozambique
- **10321** Mobile Solution for Substation Intervention
- **10366** Integrated Intellectual Automated System of Monitoring, Diagnosis and Control of Power Transformer Stock Technical Condition
- **10367** Autonomous Software and Hardware Complex for Preventing Technological Defects of the Basic Substation's Equipment Based on Remote Monitoring Data
- **10453** In-house developed tool for automatic extraction of Disturbance Record Files from IEDs and transfer it to cloud storage using capabilities of IEC 61850 Standard & File Transfer Protocol
- **10454** Battery Energy Storage System at Low Voltage Electricity Distribution Network – A Case Study
- **10456** Utility experience of real time monitoring of 765kV Circuit breaker and Reactor using advanced sensors and cloud-based asset performance management
- **10457** An Intelligent approach for Remote Asset monitoring of substation using Visual Monitoring System
- **10458** Implementation Experience of India's First 400 kV Process bus based full digital substation
- **10639** Online Monitoring and Data Analytics Enabling LV Network Investment Optimisation for a Low Carbon Future in Ireland
- **10671** An incremental approach to sustainable data center power supply
- **10672** Return of experience on high voltage equipment in operation using C4F7N mixtures

- **10673** Improved sealing of SF6 gas insulated switchgear compartments
- **10674** Life cycle comparison of different high voltage substation technologies using SF6 and alternative insulation gases
- **10699** Economic Maintenance Planning of Power Transformer for Expected Cost
- **10734** Knowledge Transfer of Substation Engineering and Experiences in Japan
- **10735** Life Management and Improvement of Reliability, Maintainability and Operability of 500 kV Substations by Replacing Ageing Equipment
- **10736** Management of SF6 Gas Leakage from Substation Equipment and Technical Guidelines on Application of Substation Equipment using SF6 Alternative Gases in Japan
- **10737** Resilience Reinforcement of Substations in Japan
- **10738** Development of Crawler-Type Robot for Substation Patrol Inspection
- **10739** Development of sensing Tools for Construction of digital Substations and Enhancement of Reliability through early Identification of Facility Abnormalities
- **10777** A versatile and future-proof condition monitoring system for high voltage switchgear
- **10890** Distributed subsea substation for Offshore Renewable Energy collection architectures and compliance with metal-enclosed switchgear's normative references
- **10891** RTE compact substation industrial strategy due to clean energy transition
- **10892** The Ring Main Unit of the future for MV distribution networks: sustainable, digital and designed with circular environmental perspectives
- **10893** Innovative "3D architecture" for an air-insulated substation of nuclear power plant
- **10894** Way to retrofit 420 kV GIL with fluoronitrile-based gas mix
- **10901** Challenges and trends rising on switchgear monitoring and control applications
- **10902** PASS M00 Wind – A versatile and robust 66 kV switchgear solution for offshore wind tower
- **10904** IEC 61850 specification process applied to classic customer project
- **10905** New approach for the on-site calibration of a LPIT in GIS and lessons learned
- **10917** Application of IEC61850 – a DNO approach
- **10972** Seismic Level Criteria for Electrical Substations in Colombia and Peru According to IEEE 693
- **10978** TSO perspectives on 40 years of GIS evolution, including SF6 issues, maintenance strategy and specifications recommendations.
- **10998** Design and Consideration for Relocatable Containerised STATCOM Installation to Provide Grid Flexibility and Stability
- **11000** Challenges and experiences on renovation of EGAT's conventional substation to IEC 61850 based digital substation
- **11001** Pilot Project Grid Scale BESS in EGAT system
- **11002** EGAT experience on integration between traditional and IEC 61850 control and protection system applied for grid scale energy storage
- **11077** Test, Installation and Operational Experiences on World's First Substation Integrating Digital, Intelligent and Greenhouse-Gas Free T&D Equipment
- **11078** EHV and DC Substation Post Insulators with Integrated Monitoring System
- **11079** Feasibility Tests of a 320 kV Gas-insulated DC Switchgear with Clean Air
- **11081** End-of-life procedures and gas reconditioning of SF6 alternative gas mixtures

- **11082** First F-gas-free and climate neutral insulated 420 kV GIS busducts installation at TransnetBW
- **11167** Contribution to the reduction of global environmental impact through the introduction of environmentally friendly distribution substation

## Tutorial

- **Tutorial WG B3.48** - Asset health indices for substation equipment

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- **Session 1** - Energy Transition on Power Equipment
  - **Session 2** - Changes in Planning and Design of Transmission and Distribution Systems
  - **Session 3** - Re-designing regulatory & market tools considering sector coupling scenarios

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More Informations :

**File Size:**132,8 MB **Study Committee :** B3 **Year:**2022

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