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Reference: **SESSION_2022_B5**



Type:

Session Materials

Title:

Session 2022 - SC B5 Package

[Session registration account](#)

Contents:

Videos

General

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

SC B5

- **Group Discussion Meeting 1**
- **Group Discussion Meeting 2**
- **Tutorial - System Integrity Protection Schemes in the Context of Evolving Power Grids**

Documents PDF

Session Papers & Posters

- **10119** Impact of renewable generation Resource on the distance Protection and Solutions
- **10120** Wide area protection Scheme for prevention of islanding of South Australia
- **10145** Influence of Inverters Based Sources on Protections Devices
- **10147** From Hertz to Megahertz: Lessons Learned About the Impact of Inverter-Based Wind

Turbine Generators on the Protection of Interconnecting Lines

- **10148** Requirements and Technological Trends on Stand Alone Merging Units
- **10150** Analysis of Network Monitoring in the Context of IEC 61850
- **10153** Itaipu and ANDE preparation for the Paraguayan-Argentinian Interconnection
- **10154** Advantages of Full Digital Substations with architecture based on Process Interface Units (PIU)
- **10191** Use of Machine Learning on PMU Data for Transmission System Fault Analysis
- **10214** Reducing the Fault Clearing Times in Networks with Inverter-based DERs
- **10217** Functional Testing of Centralized Protection Systems
- **10218** Common Substation Platform: Utility Requirements Assessment
- **10220** The Development of Merging Unit based on Process Bus for Electronic Transformer in the Digital Substation
- **10266** CPC Architectures for Small Distribution Substations
- **10305** Optimizing Underfrequency Load Shedding Strategies to Improve System Reliability
- **10341** Thinking and practice of relay protection strategy for power system with high proportion of renewable energy and power electronics
- **10342** Fault Identification and Location Scheme Based on MMC Type Pseudo-bipolar DC Distribution Network
- **10371** Intelligent Automatic Control of Isolated Operating Power System
- **10372** Experience in the Development and Implementation of an Intelligent ??? System with a Flexible Functional Architecture
- **10373** Development of Stability Monitoring, Emergency Control and Relay Protection Issues Based on Online Analysis of Dynamic Properties of Power Systems
- **10374** Practical Investigation of the Operation of Optical Current Transformers and Electronic Voltage Transformers Under Transient Conditions at 500 kV Substation
- **10375** Cable Section Fault Identification System for Mixed 110 kV and Higher Overhead-cable Lines Application Experience
- **10376** Automation of Step-down Substations Using New Technologies
- **10377** Implementation of Protection Operation Analysis and Fault Management System Based on Fault Data Aggregation and Detailed Digital Simulation
- **10471** Renewable Energy Protection challenges & Overview of Pre-synchronization study for RE (Wind & Solar) Generation in Southern Regional Grid in India
- **10472** Improvement in Asset Management of EHV Substations through remote operations – Case Studies.
- **10473** Testing in a process Bus based full digital substation-A Utility's Experience
- **10491** Study of Impact of Exclusion of line reactor current on distance protection function and fault locator for an IEC 61850 process bus compliant IED using Hardware-in-Loop simulation
- **10551** System accuracy evaluation of metering application based on optical current Low Power Instrument Transformers (LPIT) and IEC 61850 SV static energy meters
- **10552** Testing and Analyzing of Distance Protection of a Realistic Offshore Wind Farm Transmission System
- **10611** Experimental Validation of Emergency Frequency Control by considering the Self-disconnection Characteristics of Renewable Energy Sources to enhance the Resilience and Decarbonization Aspects of Power Systems

- **10612** Line Protection Relay with IP Network
- **10614** Verification of a New Protection Relay System based on High Reliable Process Bus with Oversampling
- **10622** Impact of low Network Inertia on System transient Stability
- **10641** Large scale application of fully digital substations at Landsnet
- **10675** Virtualization as an enabler for digital substation deployment
- **10676** Integration of Digital Substation IoT Sensor Data into a digital Enterprise
- **10677** Reaping the benefits of new standards editions for better integration of intelligence in IEC 61850 digital substations
- **10709** Protection in Island Systems Operating with High RES Penetration : Case Study Astypalea
- **10751** Defining a Wide Area Protection System Using 5G Communication Technology
- **10802** Experiences with the deployment of centralized protection systems using virtual protection relays for substations with large power electronic converters
- **10804** Novel approach to implementation of fully digital substation Expectations on pilot project Sigtuna 130/20 kV substation
- **10872** Hybrid neutral treatment solutions to support post-pandemic changes in work practices, economic recovery and de-carbonisation efforts
- **10903** Digital substation for EDF: engineering approach and E-monitoring development
- **10906** Engineering process and tools to support the specification, configuration, qualification and operation of substations based on IEC 61850 over their whole lifecycle
- **10922** Process bus busbar distributed protection development
- **10968** Automated Hardware in the Loop Test Bed For Protection Relays Using a Decision Three Algorithm
- **10980** Engineering and Condition Monitoring in Digital Substations- an initiative to implement Digital Substations in the Norwegian Power Grid
- **11054** Algorithms for automatic detection of faults/harmful events on 132-150 kV overhead lines
- **11091** Advanced transformer protection to secure discriminating internal faults from inrush currents in inverter-based generation networks
- **11092** The Rise of the Digital Twin Applications from a single Protection Device to full Digital Substations
- **11093** Experiences with Fault Location in Different Networks Applying Travelling Wave Technology
- **11094** Reliability enhancement through machine learning combined with advanced digital methods for the performance evaluation of transformers and reactors
- **11127** Using Machine Learning to Detect High Impedance Faults
- **11134** Modernizing Power Plant : moving towards situational Awareness

Tutorial

- **Tutorial** - System Integrity Protection Schemes in the Context of Evolving Power Grids

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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

General Report B5

More Informations :

File Size:121,5 MB **Study Committee :** B5 **Year:**2022
