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Reference: **SESSION_2022_B4**



Type:

Session Materials

Title:

Session 2022 - SC B4 Package

[Session registration account](#)

Contents:

Videos

General

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

SC B4

- **Group Discussion Meeting 1**
- **Group Discussion Meeting 2**
- **Workshop B1-B2-B4-C1 - Extra-long transnational transmission lines**
- **Tutorial - DC GridBenchmark Modelsfor System Studies**

Documents PDF

Session Papers & Posters

- **10109** Modelling and stability Assessment of integrated offshore HVDC networks
- **10110** Test Systems and Models for DC/DC Converters intended for DC Transmission Grid Applications

- **10111** HVDC technology advancements for the integration of an Offshore Wind Farm (Sofia Project) and their integration in the Design of the Sofia offshore Wind Farm
- **10112** The Harmonic Loci-Based Control Design: Practical Methods in Frequency and Time Domain for a Consistent Design of VSC HVDC Harmonic Active Solutions
- **10113** A novel control Strategy of bipolar Balance for multi-terminal HVDC and its application on a three-terminal HVDC Project
- **10115** Laboratory Demonstration of a Cascaded Three-Level Neutral-Point-Clamped Converter for Medium-Voltage DC Transmission
- **10116** Real Time dynamic Performance, control interaction and protection Studies of modular static synchronous series compensation Technology in the Great Britain Transmission System
- **10141** The Multi-terminal Hybrid HVDC Benchmark Model
- **10143** LCC-HVDC and Hybrid LCC-MMC-HVDC Transmission: A Comparison in the Brazilian Power System
- **10144** SVC Applications in Brazil - Basic Design Evaluation, Modeling, and Integration Studies
- **10211** Novel HVDC MMC VSC Topology with DC Fault Current Limiting Capability
- **10212** Clearance of Temporary Faults in MMC-HVDC Overhead Line Transmission
- **10213** Use of IEC 61850 in HVDC
- **10246** Study on the Converter Valve Peak Voltage of Bukdangjin-Godeok HVDC System under Various Operating Condition
- **10260** Mutual Electromagnetic Interaction Between VSC-HVDC Underground Cable Systems and HVAC Systems in Germany
- **10261** Business Case Analysis for the Songo Converter Station
- **10264** AC-AC Solid-State Distribution Transformer
- **10265** Application of Power Electronics to Enhance Synchronous Condenser Performance
- **10316** A New High-Frequency Resonance Suppression Strategy for VSC-HVDC System
- **10320** Design and Development of Multi-terminal Hybrid UHVDC Control and Protection System
- **10322** Operation mode and post-fault recovery of bipole VSC-HVDC system with offshore wind farms connection
- **10323** HVDC Controller with Model-Based Design and Verification through HILS
- **10327** Review of the Electrical Topology of High-voltage High-capacity DC/DC Converters
- **10328** Design and Research of DC Filter for LCC-MMC Multi-terminal HVDC Transmission System
- **10329** System Commissioning Test of the UHV LCC-VSC MTDC Project
- **10368** Evaluation of Operating Conditions of Filter Capacitors Banks Protections and Filter Circuits Switch at the Vyborg Converter Substation
- **10429** HVDC System Operation Performance Analysis Via Statistical Analysis on O&M Data with RAM Basis
- **10459** Refurbishment of India's Oldest HVDC Link, 500 MW Vindhyachal HVDC back-to-back system - Refurbishment Concept Planning and Strategies
- **10460** Unique challenges and remedies during operation of world's first ± 800 kV Multi Terminal HVDC System – North East Agra Project
- **10462** Refurbishment of HVDC System in India: Philosophy
- **10465** Feasibility study of adding a third full bridge VSC-based HVDC terminal on an existing

LCC-based HVDC transmission system

- **10466** DC Fault Recovery Capability of the Pugalur-Thrissur HVDC Project
- **10467** Fault ride through investigations in a VSC bipole HVDC system connected to renewables using an AC chopper
- **10483** Experience of Modelling Converter Based Devices in Indian Power System
- **10516** Harmonic and transient interaction due to electromagnetic interference between parallel HVDC and HVAC underground power cables
- **10517** STATCOM Refurbishment and Lifecycle Considerations in a Steelmaking Application
- **10518** Energy Storage Enhanced STATCOM for Secure and Stable Power Grids
- **10520** DC Interconnection of Adjacent Point-to-Point HVDC Links as an Enabling Step towards Multiterminal HVDC Systems
- **10570** HVDC Link Benefits for the AC Transmission System Operation. Technical and Economic Aspects
- **10584** ± 180 kV, 300MW KEPCO BP1 Haenam–Jeju HVDC Scheme Refurbishment – Key Features and Execution Experiences
- **10662** First Modular Static Synchronous Series Compensation Installation in Latin America – From Planning to Operation
- **10697** Physical Model based Monte Carlo for Early Failure Analysis of a Switching Mode Power Supply used in HVDC Transmissions
- **10704** Delivery of Modular Static Synchronous Series Compensators on the Greek Transmission System to Provide Substantial Increase in Cross-Border Interconnection Capacity
- **10729** Standard Specifications and Simulation Analysis on Control and Protection Scheme for Multivendor Offshore Multi-Terminal HVDC System
- **10730** Results of Ground Fault Test and Response to actual Ground Fault of New Hokkaido-Honshu HVDC Link
- **10731** System Study and Commissioning Test of the Hida-Shinano HVDC Link
- **10732** Grid-forming FACTS Systems for Increased Renewable Generation Penetration
- **10778** Tyrrhenian Link – a paramount project to achieve the decarbonization of the Italian power system
- **10779** High performance HVDC – LCC converters for the new SaCol 3 link: Preliminary analysis and simulations
- **10781** 125 Mvar STATCOM systems for oscillation damping and supporting HVDC-LCC reactive power unbalance
- **10795** ± 500 kV, 3000MW Bipole LCC HVDC Transmission Bukdangjin - Godeok Project– Key Design Aspects
- **10896** Integration of power flow controllers in HVDC grids
- **10897** Parallel operation of a multi-vendor HVDC scheme between France and UK – IFA2000 and Eleclink interaction studies
- **10898** EMT Simulation of an HVDC link based on extended overlap-alternate arm converter
- **10899** Severity adapted fault clearing strategy for MTDC grids including cables and overhead lines
- **10900** Unidirectional step-up isolated DC-DC converter for MVDC electrical networks
- **10940** Improving HVDC Performance Data Collection and Sharing
- **10979** Transmission System testing of a VSC based HVDC System

- **11085** A transparent process to ensure appropriate and compliant grid-forming behaviour for HVDC systems and FACTS - A TSO perspective
- **11087** European offshore grid: On protection system design for radial bipolar multi-terminal HVDC networks
- **11088** Methods and requirements for the upgrade of HVDC and STATCOM solutions with Grid Forming functions for Multi-level converter topologies
- **11089** Online Estimation of Dynamic Capacity of VSC-HVDC Systems - Proof of Concept in NordLink
- **11120** FACTS with energy storage for renewable integration in Georgia power system
- **11135** Survey of the Reliability of HVDC Systems throughout World during 2019 – 2020
- **11146** Offshore Grid Forming Control in Parallel VSC HVDC Bipole Systems
- **11147** Modified ON-OFF Control for Very High Frequency Class E DC-DC Converter with Efficiency Improvement
- **11166** Hypergrid: towards the Italian electricity grid of the future

Workshop

- **Workshop B1-B2-B4-C1** - Extra-long transnational transmission lines

Tutorial

- **Tutorial** - DC GridBenchmark Modelsfor System Studies

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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 B4

More Informations :

File Size:137,6 MB **Study Committee :** B4 **Year:**2022
