

2012 CIGRE Canada Conference – Montréal, Québec

Table of Contents - Papers

- 004 - Innovative operational security tools for the development of a stable pan-European grid
- 005 - Extending the life of your transformers, GIS and bus bars via condition monitoring
- 015 - Multi-Year Dynamic Optimal Renewable DG Allocation in Distribution networks
- 016 - Development and Implementation of Security Checking System (SCS) for Daily Generation Scheduling
- 025 – Synthetic Testing of High-voltage Circuit-breaker
- 028 - Designing Transformers for the Power Supply of a Transmission Line Inspection Robot
- 031 – Advanced Protection and Control Using B-PLC
- 033 - The Visualization Design and Implementation of Power System Operation Dynamic Monitoring
- 034 - The Development of 1000 kV Tank-Type Capacitor Voltage Transformer
- 035 - 12 kV Network Simulator for Training and Planning Purposes
- 035_FR - Simulateur de réseau 12 kV pour formation et planification
- 035_VIDEO
- 036 - Field Experiments on Precision Time Protocol Synchronization in Power Grids
- 036_FR - Évaluation sur le terrain du "Precision Time Protocol" pour la synchronisation en réseaux électriques
- 038 - Cost Effective Online Gas Monitors for Load Tap Changers and Transformers
- 038_VIDEO
- 039 – A Contribution to the Development of Circuit-breakers of the Highest Voltage Level with Reduced Number of Interruption Points
- 040 - Environmental Statistical Approach to Evaluating Swing Angles, Relative Insulation Strengths of Air Gaps and Risks of Failure Based on Locally Acquired Data - Practical Cases
- 041 - Load Flow Analysis and Mitigation Considering Geomagnetically Induced Currents
- 043 - Practical Considerations and Case Study for PSS Ramp Track Filter Design
- 044 - Pilot Project and Laboratory Testing of EGLA for First Application on Hydro-Québec TransÉnergie Transmission System

044_FR - Projet pilote et essais en laboratoire de parafoudres de ligne à éclateur externe pour la première installation sur le réseau d'Hydro-Québec TransÉnergie

045 - Research on Task Scheduling of Cloud Computing with Ant Colony Optimization in Power Grid Asset Reliability Evaluation

046 - Study on Control Center and Substation Integrated Monitor and Control System in Smart Grid

049 - Identification of Wind Penetration Levels for Microgrid-Type Systems: Development of a Framework and Case Study of an Island Grid

050 – Environment Friendly High Voltage Power Substation Design According to Legal Regulations in Poland

051 – Failures of Power Supply Lines Caused by Landslides

052 - Detecting fault generated surges in DC line of VSC HVDC schemes for travelling wave based fault location

053 - Monitoring scheme for protection IED faults in IEC61850-based substation

054 - Myth and Misunderstanding of Premium Efficiency Low Voltage Motors

058 - In-service accuracy evaluation of transformer Loading guide models

058_FR - Évaluation en service de l'exactitude des modèles prescrits dans les guides de charge des transformateurs

059 - Analysis and Experimental Study on Corona Loss of Multi-Fission Wire in UHV Electronics Corona Cage

060 - Impulsive Noise Measurement in Power Substations for Channel Modeling in ISM Band

060_FR - Mesure du bruit impulsif dans les postes électriques pour la modélisation de canal dans la bande ISM

061 - Medium Voltage Superconductor Cables Replacing Conventional High Voltage Systems for Urban Area Power Supply

062 - Surviving the Elements - The Importance of the Network in Smart Grid Applications

063 - Non-destructive testing of conductors and earth wires as a way to enhancement the OHL transfer capacity and operational availability

064 - An Online Security Assessment Implementation in Mexican Power System

065 - Modeling Various VFD-Equipped Motor Loads in Power System Security Studies

066 - Thermography Allows More Efficient Transmission Line Modeling

068 - High-Availability Allocation Model in the Cloud Environment

071 - Ultra-high Voltage Converter Valve Technology for Smart Grid Development in China

073 - A Province and Region Integrated Method of Automatic Load-Shedding

075 - An Adaptive Droop Method for Local Reactive Power Compensation in an MV Microgrid

076 - Supplementary Grid Functions in DFIG Wind Turbines to Meet Québec's Frequency Requirements

078 - Precise Algorithm for Nonlinear Elements in Large-Scale Real-Time Simulator

078_FR - Algorithme précis de simulation des éléments non linéaires pour un simulateur temps réel à grande échelle

079 - Incorporation of Protection System Failure Modes in Composite Power System Reliability Studies

080 - Use of Graph Theory for Secondary Voltage Control

080_FR - Utilisation de la théorie des graphes pour le réglage secondaire de la tension

081 - Design, Studies and Implementation of two Parallel Large Static Var Compensators in the Hydro-Québec 735 kV System

081_FR - Conception, études et implantation de deux compensateurs statiques sur le réseau à 735 kV d'Hydro-Québec

082 - Sub-Synchronous Resonance in Grid-Connected DFIG-based wind farms: modeling, analysis and countermeasures

083 - Chemical markers use for the diagnosis and life estimation of power transformers: a preliminary study of their origins

083_FR - Utilisation des traceurs chimiques pour le diagnostic et l'estimation de la vie résiduelle des transformateurs de puissance, une étude préliminaire de leurs origines

085 - Real Time Testing of Intelligent relays for Synchronous Distributed Generation Islanding Detection

086 - Multiphase Short-Circuit Analysis Solver in Phase Coordinates Using A Modified-Augmented-Nodal Analysis Approach

088 - Distributed Generation Fault Interconnection Protection Using Intelligent Relays

089 - Application of Condition Monitoring and Technology within National Grid (UK)

090 - On the Deflection Limit for Wood Pole Design

091 - A New Approach to AGC Hydro-thermal Coordination with Joint Optimal Operation

093 - Implementation of a Web-based Real-Time Monitoring and Control System for Smart Grids Applications

- 094 - A Real-time Power Controller for Grid-connected Inverters in LV Smart Microgrids
- 095 - Comparative Analysis of Active-Power Control between two Buses Using an HVDC Link and a Variable Frequency Transformer
- 096 - Design and Implementation of a Bi-Directional Power Converter for an Induction Machine-based Integrated Starter-Generator System
- 097 - Dynamic Modelling of MMC-based MTDC Systems for the Integration of Offshore Wind Generation
- 099 - The Impact of Distributed Generation in Scotland (on the Energy System, to Consumers and to National Emission Levels)
- 101 - Research on Corona Characteristics and Optimizing of top phase grading rings in 1000 kV UHV AC compact transmission lines
- 103 - Present and future reinforcements in the Spanish transmission grid allowing to control active and reactive power flows (HVDCs, FACTS and PSTs)
- 105 - Study on High Angle Operation for the converter valve for Hami-Zhengzhou +/- UHVDC Transmission Project
- 107 - CFD Investigation on thermal performance of different types of windings for a 300 MVA transformer
- 108 - Assessing Distribution System Voltage Impacts as a Function of PV Generation Levels and Voltage Regulator Operating Modes
- 109 - Assessment of Reliability Impact for Using Ground Switches in High Voltage Load Stations
- 110 - Managing the intermittency of renewable energy generation in Microgrids – issues and solutions
- 110_FR - La gestion de la variabilité des ressources d'énergie renouvelable dans les microréseaux – enjeux et solutions
- 111 - Integration of DTR and Series Equipment Limit Calculation into Real-Time Monitoring System
- 112 - Influence of Ageing by-products on the Stability of some Transformer Fluids
- 113 - Efficiency of a Service-aged Transformer Oil Reclamation Mobile Unit
- 113_FR - Performances d'une unité mobile de régénération des huiles de transformateurs de puissance
- 114 - New grid-planning approaches for the large-scale OWF grid connections
- 116_FR – Étude de la stabilité transitoire en utilisant SIME avec le modèle classique et deux axes
- 117 - Smart Grid Fault Management Techniques of a Dutch Utility

118 - EMTP-MATLAB/SPS Co-simulation for Large-Scale Integration of Wind Power Plants

118_FR - Co-simulation avec EMTP et MATLAB/SPS appliquée à l'intégration à grande échelle de centrales éoliennes

119 - OHL Assessment and Risk Evaluation Based on Environmental and Inspection Data

121 - Protection Challenges and Solutions for Temporary and Unusual Bus Configurations

124 - Special Considerations for Insulation Co-ordination Design of the 3150 MW 600 kV Rio Madeira HVDC Transmission Scheme

125 – Health Index for Power Transformers and Shunt Reactors

125_FR – Indicateurs d'état des transformateurs de puissance et des inductances Shunt

126 – Transfer Variability and the Need for New Limits on the Grid

128 - Phase Angle Jump Estimation of Smart Grid Acquired Information

128_FR - Estimation du saut d'angle de phase à partir de données saisies dans un réseau intelligent

129 - Derating Approaches for Induction Machines Working with Unbalanced and Over/Undervoltage Supplies

130 - Real-Time Adaptive Optimization Engine Algorithm for Integrated Volt/VAr Optimization and Conservation Voltage Reduction of Smart Microgrids

131 - Transient Stability Constrained Optimal Power Flow using Fmincon Interior point and Genetic Algorithm Solvers

133 - Real Time Thermal Rating

134 - Transient Stability Constrained Optimal Power Flow: Methods and Challenges

135 - New Power Generation Technologies: Waste to Energy Pathways for the Urban Environment

136 - Islanding Detection of Inverter-interfaced wind turbines using intelligent relays

138 - Digital Real-Time Simulator Using IEC 61850 Communication for Testing Devices

138_FR - Simulateur numérique temps réel utilisant le protocole CEI 61850 dans un environnement d'essais avec équipements

139 - Optimization of Security Limits on the Hydro-Québec Transmission System

139_FR - Optimisation des limites de sécurité du réseau de transport d'Hydro-Québec

140 - Islanding Detection at Châteauguay HVDC Substation

140_FR - Détection des situations d'îlotage au poste électrique CCHT de Châteauguay

141 - New Efficient Approach for Optimal Sizing and Placement of Micro Combined Heat and Power Systems on Low Voltage Grids

142 - Challenges and Solutions for Fast and Accurate Fault Location and System Restoration

144 - Vision-based guidance algorithms for UAV power line inspection

145 - Advanced Applications of FACTS in Industrial Distribution Systems in Middle Europe

146 - Wind-Diesel Emulator for Remote Grid Applications

147 - Synchronous Phasors Monitoring System – Testing Project in the Czech Republic

149 - Damage Assessment of Existing Transmission Towers Using Sugeno Model

150 - State of Deployment of a Smart Grid Demonstration Project

150_FR - Projet de démonstration de réseau intelligent – État de déploiement

153 - Current challenges for the European Interconnected System and Situation Awareness in Transmission System Operation

156 - Sizing Energy Storage Facility for Voltage Regulation

159 - Integrated evaluation of technical, economical, social and environmental aspects of planning of works at transmission and distribution systems: a proposal

162 - Temperature and Stress Effects on Charge Accumulation and Transport in Extruded Insulation Compositions

165 - Fault Diagnostic Aid System for Hydro Generator

166 - Advances in wind load modelling on overhead transmission lines

168 - Introducing Secure Authentication Version 5 for DNP3

170 - Simple and Effective Measures for Noise Reduction in Power Transformers

171 - An Information Overlay for Grid Stability Alerts

172 - Risk Assessment of Power Equipment Using Hybrid Method Based on Technical and Economical Evaluation in Smart Grid

174 - Network Robustness Index for Power Systems

175 - Optimal Maintenance Strategy Considering On-line diagnosis for Power System Facilities in Smart Grid

176 - Framework Selection for Environmental Assessments in HVDC technology

178 - Multi-Terminal Operation of the South-West Link HVDC Scheme in Sweden

179 - Oil-conductivity Measuring Methods for the Condition Assessment of HVDC Insulation Systems

181 - Development of Vanadium Redox Flow Battery Model for Energy Storage System

182 – Electricity Theft Detection

183 - Dynamic Line Loading of Transmission Lines: An Application Guideline

184 - Increasing Demand for Voltage Control in Secondary Substations in Order to Increase Network Capabilities for Renewable Energy Feed-In

185 - Towards Numerical Prediction of Overhead Line Instabilities due to Icing

186 - Design and Analysis of a Region-Wide Remotely Controllable Electrical Lock-Out System

187 - A practical online monitoring system based on wide area measurements for power system dynamic security assessment

188 – Health and Risk Index Tools for Station Apparatus

189 - Medium-term Operation planning problem of hydrothermal systems via multistage stochastic methods

190 - Solving Hydro-Québec's midterm generation scheduling problem under reservoir inflow uncertainty

191 - Understanding Sub-synchronous Interactions in Power Systems using Dynamic Phasor Based Small Signal Stability Analysis

193 - An Adaptive Online Voltage Stability Monitoring Scheme using Synchro-phasors

196 - On-site testing of extruded AC and DC cables above 36 kV and up to 500 kV - Some thoughts about the physics behind it, standards and test techniques

197 - Optical Sensor for Non-Contact Voltage Measurement

197_FR - Capteur optique pour la mesure de tension sans contact

199 - Integrated test Suite - A new, innovative and an emerging testing tool

200 - Utilizing the bandwidths of the Protection data Interface for effective Smart Grids

201 - How to sustain your investment of intelligent field devices during times of smart grid evolution

202 - Importance of Smart Grid System [A Part of Green-Energy] and Sustainable Energy in Ontario, Canada

205 - Advanced Nano-Structured TapeS for electro-technical high power Insulating Applications

206 – Strategies towards the Development of Novel Nanostructured Functional Dielectrics

206_FR - Stratégies en faveur du développement de nouveaux diélectriques fonctionnels nanostructurés