



8TH SOUTHERN AFRICA REGIONAL CONFERENCE

14 - 17 NOVEMBER 2017



PROVISIONAL PROGRAMME Wednesday, 15 November

| Time | Venue 1 | Venue 2 |
|----------------------|--|---|
| 09:00 - 09:10 | Welcome , Mark Waldron, Technical Council Chair, Cigré | |
| 09:10 - 09:40 | Keynote Address: Dr Rob Stephen, President, Cigré | |
| 09:40 - 10:30 | Tea/Coffee/Exhibition | |
| 10:30 - 12:30 | SESSION 1 Challenges associated with the integration of Distributed Generation on Utility Networks | SESSION 2 Materials and Asset management developments for the future in uncertain times |
| 10:30 - 10:45 | Microgrids vs Centralized grids, <i>Ackeby S</i> | Field trial of carbon composite core covered conductor system, <i>Lee M</i> |
| 10:45 - 11:00 | Analysis of utility scale wind and solar plant performance in South Africa relative to daily electricity demand, <i>K Kemper</i> | Developing reproducible electrical tree-resistance epoxy nanodielectric with improved thermal performance, <i>Hanks A</i> |
| 11:00 - 11:15 | Methodology for assessing the impact of intermittent generation on Utilities, <i>de la Bat J</i> | Performance of Insulators under Impulse AC and HVDC Voltages, <i>Lasabi O</i> |
| 11:15 - 11:30 | Utility Scale Battery Storage The New Electricity Revolution, <i>Tuson P</i> | The use of 3D printing for high voltage applications and non-critical spares, <i>Mukkudem M</i> |
| 11:30 - 11:45 | Model validation for accurate representation of renewable power plant technologies in developing utilities to free up capacity, <i>Smith J</i> | Pre-emptive tripping of distribution power transformers for decaying auxiliary DC supply, <i>van Zyl S</i> |
| 11:45 - 12:00 | Understanding the impact of embedded renewable generation and its interaction with local load in the time-domain, <i>Lincoln Z</i> | Air Breakdown Voltage Decreases as Altitude Increases. A review from Chinese experiments, <i>Naidoo P</i> |
| 12:00 - 12:15 | Overcoming Hydraulic Issues Using a Hydro Power Scheme, <i>Drommi JL</i> | Evaluating Step and Touch Potential Risks on Earthing Systems of High Voltage Cable Systems, <i>Visagie DL</i> |
| 12:15 - 12:30 | Questions & Closing | Questions & Closing |
| 12:30 - 13:30 | Lunch / Exhibition | |
| 13:30 - 15:00 | SESSION 3 System Reliability and Performance improvement measures in the Wires Business | SESSION 4 Towards Universal Access in Africa. Creating a platform to accelerate electrification on our continent |
| 13:30 - 13:45 | Developing a model for the prediction of system reliability indices on distribution networks, <i>Herndler B</i> | The Cost of Sustainable Energy, <i>Chibambo C</i> |
| 13:45 - 14:00 | An integrated coherent Big Data network Performance management solution, <i>van Wyk W</i> | Servicing Backyard dwellings in the City of Cape Town, <i>Kotze B</i> |
| 14:00 - 14:15 | Clearing of transient faults in medium voltage networks by means of single-phase tripping, <i>van der Mescht CJ</i> | A Review on Policy and the Cost Associated With Electrification of Informal Settlements, <i>Soni M</i> |
| 14:15 - 14:30 | Magnetic induced currents and voltages on earthed lines due to faults on adjacent lines, <i>Dirkse van Schalkwyk W</i> | A tool for pre-feasibility techno-economic comparison of rural electrification options, <i>Rozzi F</i> |
| 14:30 - 14:45 | Advances in Power Quality Requirements for RPPs, <i>Botha G</i> | Modelling an electrification connection strategy, <i>Malapermal S</i> |
| 14:45 - 15:00 | Questions & Closing | Questions & Closing |

Wednesday, 15 November (Cont)

| 15:00 - 15:30 | Tea/Coffee/Exhibition | |
|----------------------|--|---------|
| Time | Venue 1 | Venue 2 |
| 15:30 - 17:00 | SESSION 5 | |
| | Transmission System integration challenges | |
| 15:30 - 15:45 | Operational Studies for the Synchronization of the WAPP Interconnected Power system, <i>Rozzi F</i> | |
| 15:45 - 16:00 | A Historic Perspective of Power System Disturbances in SAPP, <i>Zimba S</i> | |
| 16:00 - 16:15 | Recovery voltage analysis of the Matimba – Phokoje 400 kV transmission line during a single phase-to-earth fault, <i>Schutte P</i> | |
| 16:15 - 16:30 | Shortcomings and proposed improvements to asset health index of Eskom transmission lines, <i>Mushabe S</i> | |
| 16:30 - 16:45 | Optimise demand response for primary frequency control, <i>Gumede M</i> | |
| 16:45 - 17:00 | Questions & Closing | |
| 17:00 - 20:00 | Welcome Cocktail Function and Exhibition Opening | |

Thursday, 16 November

| Time | Venue 1 | Venue 2 |
|----------------------|---|--|
| 08:00 - 10:00 | SESSION 6 | SESSION 7 |
| | Technology solutions and innovations impacting on Transmission Design elements | |
| | Measuring Transformer health – diagnostic tools and other measures | |
| 08:00 - 08:15 | 765 kV SS Acoustice Noise impact study by predictive software and comp approach, <i>Hubbard R</i> | Transformers within photovoltaic generation plants Challenges and possible solutions, <i>Murray R</i> |
| 08:15 - 08:30 | Review and improvement of Transco Dispatch, <i>Chown G</i> | Holistic approach to on-line transformer Monitoring, <i>Tozzi M, Doria C</i> |
| 08:30 - 08:45 | Inertia and Rate of Change of Frequency, <i>Chown G</i> | Transformer oil degradation on PV plants - A Case study, <i>Nyandeni D</i> |
| 08:45 - 09:00 | Assessing the need for additional surge arresters in an uprated high voltage substation, <i>Schutte P</i> | Alternate and sustainable materials in Power Sector for developing countries, <i>Sharma R</i> |
| 09:00 - 09:15 | Uprating of high voltage overhead transmission lines using intermediary catenary suspenders, <i>Henderson N</i> | Advantages derived from Gas Chromatographic identification of petroleum products and additives within the power industry, <i>Lombard A</i> |
| 09:15 - 09:30 | Strategic Plan for Integrating Future Renewable Energy Generators in South Africa, <i>Theku M, Ndlhovu C</i> | Employment of various strategies to optimize asset management of transformers, <i>Mtetwa S</i> |
| 09:30 - 09:45 | Questions & Closing | |
| 09:45 - 10:00 | | Natural Ester Oil Power Transformer Solution for PPC Slurry Substation, <i>Singh A</i> |
| 10:00 - 10:30 | Tea/Coffee/Exhibition | |

Thursday, 16 November (Cont)

| Time | Venue 1 | Venue 2 |
|----------------------|--|---|
| | SESSION 8 | SESSION 9 |
| 10:30 - 12:30 | Technology solutions and innovations impacting on Transmission Design elements | Integrating Network Planning Tools with Grid Code requirements |
| 10:30 - 10:45 | Consideration to include High Surge Impedance loading lines as part of system planning in ESKOM, <i>Maphumulo L</i> | Cost of Unserved Energy in South Africa, <i>Minnaar U</i> |
| 10:45 - 11:00 | Use of Thyristor controlled Capacitors to enhance power system transient stability, <i>Gumunyu T</i> | Assessment of Geographical Based Load Forecast Technique at Eskom Distribution, <i>Soni M</i> |
| 11:00 - 11:15 | Improved methods for surface impedance estimation in modelling geomagnetically induced currents in power networks, <i>Cilliers P</i> | Impacts of SSEG on SA MV Networks, <i>Moodley G</i> |
| 11:15 - 11:30 | Variable Shunt Reactors Applications and System Aspects, <i>Bengtsson C</i> | Innovative method to determine Distributed Energy Resource Hosting Capacity, <i>Bello M</i> |
| 11:30 - 11:45 | First off achievements used on the Kappa-Sterrekus 765kV overhead line, <i>Jacobs B</i> | Non-technical loss mitigation lessons for Africa from global experiences, <i>Beutel A</i> |
| 11:45 - 12:00 | Seasonal Variation of Soil Resistivity and the Correction Factor, <i>Thomas C</i> | Grid Code compliance tests of Renewable Technologies integrated on the NamPower Network, <i>Makusuka J</i> |
| 12:00 - 12:15 | Elevated lightning activity at PV Plant - Hypothesis and Preliminary findings, <i>Pretorius P</i> | Testing & Technical Evaluation for compliance to South Africa Grid Code (SAGC) of the first 1800MW of Renewable energy, <i>Mvura D</i> |
| 12:15 - 12:30 | Questions & Closing | Questions & Closing |
| 12:30 - 13:30 | Lunch / Exhibition | |
| | SESSION 10 | SESSION 11 |
| 13:30 - 15:00 | Challenges associated with the integration of Distributed Generation on Utility Networks | Planning for System Resilience in Utilities |
| 13:30 - 13:45 | Investigating Capital deferment by installing a peak shaving and energy shifting battery storage system, <i>Neethling AD</i> | Protecting Critical Infrastructure by Adapting to Resilience Thinking for a National Blackout Risk Assessment Framework, <i>van Harte M</i> |
| 13:45 - 14:00 | Initial Feasibility Study of a Microgrid Implementation, <i>Khan I</i> | Power system resilience - Blackout recovery defence barrier, <i>van Harte M and Nambiar A</i> |
| 14:00 - 14:15 | A Case Study On the effectiveness of preliminary Power Quality Emission on windfarms, <i>Serfontein D</i> | Addressing Emergency Decision Making in Complex incidents: Implementation of Advanced Incident Command System in Eskom, <i>Correia J</i> |
| 14:15 - 14:30 | Increasing the uptake variable renewable energy (VRE) sources through optimal placement of collector substations, <i>Mushwana C</i> | Network and Data security strategy of the Electric Power System, <i>Taljaard M</i> |
| 14:30 - 14:45 | How Digital Microgrids contribute to achieving the electrification challenge, <i>Harris S</i> | Questions & Closing |
| 14:45 - 15:00 | Questions & Closing | |
| 15:00 - 15:30 | Tea/Coffee/Exhibition | |
| 15:30 - 16:00 | Closing Ceremony | |