

The Future of Electricity Grids: Challenges and Opportunities

Cigre Egypt, Cairo 6-8 March 2019

Wednesday 6 March 2019

08:00 – 09:00	Registration of delegates
09:00 – 10:00	<p style="text-align: center;"><u>Opening Ceremony</u></p> <p>1.1 Prof. Dr. Ahdab Elmorshedy, President of Cigre. 1.2 Video 1.3 Eng. Philippe Adam, Cigre Secretary General. 1.4 Eng. Hani Dahy, Chairman of the Engineering Syndicate 1.5 H.E. Dr. Mohamed Shaker, Minister of Electricity and Renewable Energy, Egypt. Opening of Exhibition / Registration of delegates – Open to all delegates</p>
	Opening Exhibition Room Excelsior II
10:00 -10:30	Coffee Break
	<p><u>Room Excelsior I</u> Session Chair: Prof. Dr. Ahdab Elmorshedy, Prof. Dr. Almoataz Abdelaziz</p>
10:30 -10:45	<p>“Digitalizing Grid Infrastructure –from AC Substations to HVDC Systems” Eng. Per Skarby, ABB</p>
10:45-11:00	MADKOUR
11:00-11:15	HUAWEI
11:15 -12:30	<p>“Introduction of Study Committee B3 (Substations and electrical installations) activities” Eng. Koji Kawakita- Chairman of Cigre SCB3 “Saving Through Optimized Maintenance in Air Insulated Substations” Eng. Akira Okada- Member of Strategic Advisory Group, Study Committee B3</p>
12:30 -13:00	Coffee Break
	<p><u>Room Excelsior I</u> Session Chair: Prof. Dr. Ahdab Elmorshedy, Prof. Dr. Almoataz Abdelaziz</p>
13:00-13:45	<p>“HVDC opportunities and challenges” Dr. Mohamed Rashwan Chairman of CIGRE SC B4, DC systems and power electronics</p>
13:45 -14:45	<p>“Feasibility study for a global electricity network”. Mr. Gérald Sanchis, Convener of Cigre WG C1.35, Marc Le Du (French TSO), Mr. Nicolas Chamollet (Electricité de France) Cigre C1.35 group</p>
14:45-15:45	Lunch in Terrace
	<p><u>Room Excelsior I</u> Session Chair: Eng. Hamdy Okasha, Dr. Khaled Eldestawy</p>
15:45-16:00	INFINITY SOLAR
16:00-16:15	GLOBALTRONICS

16:15 -18:00	<p><u>Room Excelsior I</u> <u>Session 1A:</u> “The Digital Utility: Opportunities and Challenges” <i>Session Chair: Eng. Hamdy Okasha, Dr. Khaled Eldestawy</i></p>	<p><u>Room Florentine</u> <u>Session 1B:</u> “The Digital Utility: Opportunities and Challenges” <i>Session Chair : Eng. Khaled Abd Elkareem, Dr. Dalal Helmi</i></p>
	<p>101 “Risk Assessment of Hidden Failures in Electrical Power Systems” <i>Gamal A. Raheem, Gamal A. Haggag, Medhat Gaber</i></p>	<p>106 “Harmony Search Optimized PID and FOPID Controllers Design Using Four Different Error Criteria in LFC of Power Systems” <i>S. S. Mohamed, S. H. Elbanna, A. M. Abdel Ghany</i></p>
	<p>102 “Egyptian Transmission Master plan - Securing the Future Power Supply under Strong Demand Growth” <i>G. Abd El-Rheem, M. Abdul-Hussain, K. Abd-El-Kareem Hassan, P. Awater, A. Abd El-Maguid, M. Schwan , G. Mahmoud Ousama, , J. Verboomen, T. Mostafa Kamel</i></p>	<p>107 “Performance Evaluation of Conventional Protection for Single-Phase Return Faults in Medium Voltage Feeders” <i>Ehab M. Esmail, Mahmoud A. Elsadd, Abdel-Maksoud I. Taalab, Tamer Kawady, Nagy Elkalashy</i></p>
	<p>103 “Inertia and Voltage Challenges in Future Power Grids - Impact of SVC PLUS Frequency Stabilizer” <i>E. Spahic, O. Kuhn, A. Rentschler, M. Delzenne, M. Schwan, Y. El Jazouli</i></p>	<p>114 “Enhancement of Current Transformers Maintenance operations Using Nano-particles” <i>Sobhy. S. Dessouky, Saad A. Mohamed Abdelwahab, Mohammed Shaban</i></p>
	<p>105 “Power System Restoration Using Closeness Centrality and Degree of a Node” <i>Omar H. Abdalla, Alaa Noor Eldin, Adel A. Emary, and Azmi W. Farid</i></p>	<p>115 “Performance enhancement of monitoring and operation of renewable energy system in different environment conditions” <i>Sobhy. S. Dessouky, Mahmoud Fawzy, Ibrahim Elmohamady</i></p>
		<p>116 “Digitization of Substation Functions” <i>Ehab Ahmed El Metwally, Wael Yousef</i></p>

Thursday 7 March 2019

	<p><u>Room Excelsior I</u> Session Chair: Dr. Mohamed Mousa Omran, Dr. Hassan M. Mahmoud</p>
9:00 -9:30	<p>Local manufacturing placement with objective of serving clean energy applications.4 Presenter: Abdullah Elkammah ELsewedy Electric Presenter: Ahmed Hassouna</p>
09:30 -10:45	<p>“Switching Equipment” Eng. Nenad Uzelac Chairman of SCA3 Transmission and Distribution Equipment Dr. Hiroki Ito - Previous Chair of Cigre SCA3 (from Mitsubishi Electric) Dr. Rene Smeets, Cigre representative from Netherlands, KEMA lab</p>
10:45-11:15	Coffee Break
09:30-14:00	<p><u>Room Excelsior-III</u> Women in Energy Workshop.</p>
	<p><u>Room Excelsior I</u> Session Chair: Mr. Mohamed Elsis, Eng. Mahmoud Elnakeeb</p>
11:15 -11:30	EGEMAC - Eng. Medhat Ramadan
11:30-11:45	<p>“Managing Power Quality”, Dr. Fahd Hashiesh, VP Global Power Quality Market Manager - ABB</p>
11:45-12:15	<p>“Technical Background of the Grid Code” Prof. Dr. Omar H. Abdalla, Fellow of the Egyptian Society of Engineers</p>
12:15 -13:15	<p>“Manpower Building Revaluation panel” Panel Chair: Dr. Nikolaus Supersberger Prof. Dr. Mohamed Elsobki (Cairo University), Dr. Ashraf Mansour (GUC), Lars Fiechel (GIZ), Burkhard Hinz (KfW)</p>
13:15 -13:30	Coffee Break
13:30 -15:00	<p><u>Room Excelsior I</u> Session 1 C: The Digital Utility: Opportunities and Challenges Session Chair : Dr. Amgad Elwakeel, Dr. Hassan Mahmoud Hasaneen</p>
13:30 -14:00	<p>Oracle “Customer Centric Grid Operations – Accelerating Smart Grid Value” Nauman Afsar Regional Vice President Middle East Africa & Turkey, Oracle Utilities</p>
14:00 -15:00	<p>111 “Mitigation of Power system Harmonics Generated from the Generator Excitation in the Nuclear Power Plants by using Shunt Passive Tuned Filters” Hassan M. Mahmoud, Salem M. Elkhodary, Saied A. Qotb, Emad El-Din F. Sharouda</p>
	<p>113 “Protection Audit of 220/132/66 kV Substation” NIRAV TAUNK, SHAILESH MODI, SHEFALI TALATI, VINOD GUPTA</p>
	<p>117 “Electric Power Systems Reliability Study on Real Models” Isa QAMBER, Mohamed Y. AL-Hamad</p>
	<p>119 “Improving Operation of Distance Relay in Series Compensated Transmission Lines” HASSAN SAAD, and SALAH KAMAL</p>

15:00 -16:00	Lunch in Terrace	
16:00 -18:00	<u>Room Excelsior I</u> <u>Session 2A</u> “Integration of Renewable Energy into the Grid” Session Chair: <i>Dr. Nikolaus Supersberger, Dr. Mohamed Elkhiat</i>	<u>Room Florentine</u> <u>Session 2B</u> “Integration of Renewable Energy into the Grid” Session Chair: <i>Mrs. Nadia Katary, Mr. Abd Elmohsen Khalf</i>
16:30 -18:00	201 “Mitigation of phase shift angle for long radial transmission lines based on generation redistribution and connection point location replacement to achieve a ring system” <i>Gamal A. Raheem, Gamal A. Haggag</i>	203 “A Review of Control Strategies of Permanent Magnet Synchronous Generator Based Wind Turbine” <i>Eman M. Eissa, Hany M. Hasanin, Mahmoud Abd-Elhamid</i>
	202 “Network Analysis and the Impact of Photovoltaic Integration On System Stability Using Library Model of PV Arrays Integrated with PSS/E” <i>A.I. Abozaida, M. M. Sayed b and A. Elmorshedy</i>	207 “Techno- economic analysis of participation of nuclear power plants with the renewable energies in the electricity network in Egypt” <i>Abla Gado</i>
	204 “Studying the Impact of Benban Solar Park on the EETC Transmission Network” <i>K. Abd-El-Kareem Hassan, M. Abdul-Hussain, A. Amin, M. Fawzy, G. Mahmoud Ousama P. Awater, M. Schwan, J. Verboomen</i>	208 “Role of Solar PV Systems and Diesel Engine Generators In Reducing Fuel Consumption for Power Generation in Libya” <i>Ahmed Ali-Ashaibi, Mohamed Amer Ali Rahim, Fawzy Amir Gashout</i>
	205 “Steady-State and Transient Performances of the Egyptian Grid with Benban Photovoltaic Power Park” <i>O. H. Abdalla, H. H. Fayek, and A. M. Abdel Ghany</i>	209 “High penetration PV system to a medium voltage distribution feeder Risks mitigation and advantages Nileen feeder case study” <i>Ghazawneh K.T</i>
	213 “E-Mobility, Renewable Energy and The Grid; Threats and Opportunities” <i>Gaber Desouky, Dalal Helmi, Mohamed Youssef, Rania Raaf</i>	214 “SWOT Analysis of Photovoltaic Energy in Egypt” <i>Omar Hanfy Abdalla, Kamelia Youssef, Azza Ali Abdou Mostafa</i>

	<p>223 “Review of Cost-Benefit Analysis Frameworks for Substations Automation” <i>Asmaa Ibrahim, Mohamed Elsobbki, Ahmed Elguindy</i></p>	<p>215 “Effect of High Penetration of Wind Energy on Power Quality and Power Losses of distribution Networks” <i>Haytam Ibrahim. Doaa m.Yehia. Ahmed M. Azmy</i></p>
	<p>225 “Integration of Distribution Real-time System and Management System Based on Dynamic Modeling” <i>Qingnong Lin, Hui Yao</i></p>	<p>217 “Virtual power plants novel electro-economical modelling approach” <i>Fatma El Zahraa Magdy, Doaa Khalil Ibrahim, Waheed Sabry</i></p>
	<p>226 “Cost-Benefit Analysis for Substation Automation: A case study on the Egyptian Transmission Network” <i>Asmaa Ibrahim, Mohamed Elsobbki, Ahmed Elguindy</i></p>	<p>218 “Performance Comparison between Crystalline Silicon and Thin Film Technologies under the Weather Conditions of Egypt” <i>Abdelrahman Akila, Kamelia Youssef</i></p>

Friday 8 March 2019

Room Excelsior I		
Session Chair: Eng. Baseem Yousef, Dr. Mohamed Abd Elrahman		
09:00 – 9:15	Room Excelsior I “New and additional investments in Electrical Industries due to a very high and diversified demand” Eng. Baseem Yousef, ELMACO	
09:15– 10:30	Room Florentine Session 2 C Integration of Renewable Energy into the Grid Session Chair: <i>Eng. Medhat Ramadan, Eng. Hossam Afify</i>	Room Excelsior I Session 3 Global and Regional Electricity Interconnectivity Interconnection Session Chair: <i>Eng. Baseem Yousef, Dr. Mohamed Abd Elrahman</i>
	<p>“Photovoltaic Power Generation System Level Rapid Power Control Technology and its Application” <i>Sean Jiang, International Marketing Director</i></p> <p>220 “Power System Improvement Using Different AI Optimization Techniques” <i>Mohamed G. Z. Fouly, A. A. El-Mahdy, I. M. Mahmoud, Ashraf Seley, R. A. Sweif, T. S. Abdel-Salam</i></p>	<p>301 “HVDC Design Aspects for hybrid DC Circuits with Dedicated Metallic Return using DC Overhead Lines and DC Cables” <i>V. Hussennether, C. Bartzsch, F. Stömmmer</i></p>
	<p>221 “Optimal Distributed Generation Placement and Sizing Using Genetic and Ant Colony Algorithms” <i>Yousef Y. Zakaria, R. A. Swief, Noha H. El-Amary, Amr Ibrahim</i></p>	<p>302 “New design of a strong action power system stabilizer for a continuously loaded large scale synchronous generator” <i>Aya Abou-El-Saoud, Sayed El-Banna, Ahmed Yakout, Waheed Sabry</i></p>
	<p>222 “Threshold High Penetration Level of Wind Generation for Securing Voltage Stability of Electrical Power Systems” <i>Salwa M. El-Samanoudy, Tarek Mahmoud, El-Said Osman</i></p>	<p>303 “Series Compensation of 400 kV Transmission Line Connecting Al Duqm 1200 MW Coal-Fired Power Station to Oman Grid” <i>H. A. Al Riyami, A. G. Al Busaidi, A. A. Al Nadabi, M. N. Al Sayabi, and O. H. Abdalla</i></p>
	<p>224 “On Remote Anti-Islanding Detection Techniques” <i>Yasser Ahmed Elshrief, Amin Daniel Asham, Dalal Hussen Helmi, Belal Ahmed Abozalam</i></p>	<p>304 “Electromagnetic Field Profiles Neighbouring and Among Hybrid Transmission Lines in Egypt Electric Utility” <i>A. Elmorshedy, M. M. Samy and A. Emam</i></p>

10:30 – 11:30	<p>Session 4 “Telecommunication Backbone and Information Security” Session Chair: Eng. Medhat Fouda, Eng. Mohamed Assal</p>	<p>305 “Analysis on HVDC Converter: Frequency Control and Dynamic Reserve Power Share in GCCIA” Hashim Al-Zahrani, Abdulraheem Al-Garni</p>
	<p>403 “International Experiences and Lessons learned from Cyber Attacks on Smart Electricity Grids” Gaber Desouky, Dalal Helmi, Noher Mohamed</p>	<p>306 “HVDC solutions for interconnecting grids” Peter Lundberg, Athanasios Krontiris</p>
	<p>Session 5 Electricity Market and Regulatory Issues Session Chair: Eng. Mehat Fouda, Eng. Mohamed Assal</p>	<p>307 “Evaluation the Effect of EMF for EHV-OHTL on Live Line Maintenance in KSA” A. W. Al-Shammari, M. S. Baazzim, E. Hatim</p>
	<p>501 “Electricity Market Restructure in Egypt” Gaber Desouky, Dalal HELMI, Mohamed Ibrahim, Hamada HAGGAG, Yasser Elgammal</p>	<p>308 “Implementation of Variable Frequency Transformers (VFT) to Stabilize Electric Power Systems” Islam Emam, Khairy F. Ali</p>
	<p>503 “Trade Opportunities with European Electricity Market and Egypt Role” Mohamed Al-Hamad, Ahmed A. Al-Ebrahim</p>	<p>309 “Modern 21st Century Transmission Grid with In-Built Retrofit” R.M. Kabwebwe</p>
11:30 – 12:30	Coffee break and Prayer Time	
	<p>Room Excelsior I Session Chair: Dr. Mohamed Rashwan, Prof. Dr. Ahdab Elmorshedy, Eng. Viola Aziz</p>	
12:30 – 13:30	<p>“Guide for rating calculations of HV cables (TB 640, WG B1.35) “Implementation of long AC HV and EHV cable systems” (TB 680, WG B1.47) Ahmed Abou Elenien, Assistant Manager – Design, Ducab High Voltage Systems</p>	
13:30– 14:00	<p>“Nuclear Power Plant Cyber Security Improvement for Data Transmission” Dr. Jung Jae-Cheon, Professor, Department of NPP, KEPCO International Nuclear Graduate School</p>	
14:00 – 15:00	<p>“HVDC planning, technology selection and specifications” Dr. Mohamed Rashwan Chairman of CIGRE SC B4 “DC and Power Electronics”</p>	
15:00 – 15:30	Recommendations	
15:30 – 16:30	Lunch	
	Closing	