

Conference Program

The First Day: Sunday 27th October 2019 (28th Safar 1441)

Conference Registration & Reception **8:00 - 9:00**

Opening Ceremony:

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| - Welcome statement and Holy Quran | 09:00 - 09:05 |
| - Host Country Address | 09:05 - 09:15 |
| - GCC Address: H.E. GCC Secretary General | 09:15 - 09:25 |
| - GCC Cigre Address: H.E. Chairman of GCC CIGRE Board of Directors | 09:25 - 09:35 |
| - Short film about Cigre | 09:35 - 09:40 |
| - Cigre Address | 09:40 - 09:45 |
| - Honoring Conference Main sponsors | 09:45 - 10:00 |
| - Exhibition inauguration | 10:00 - 10:30 |
| - Tea Break | 10:30 - 10:45 |

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10:45-11:15	Keynote Presentation: Dr. Arshad Mansoor,	
27 th October 2019 11:15 – 12:45	Panel Discussion :	Energy transition in the GCC
	Panel Moderator:	Dr. Najib H. Dandachi
	Panelists : <ul style="list-style-type: none"> Ahmed Ali Al Ebrahim, CEO – Gulf Cooperation Interconnection Authority. Dr. Ahmed Al Busaidi, Expert in the renewable energy at the Scientific Research Council in Oman. Dr. Arshad Mansoor, Senior Vice President Research and Development, EPRI USA. Dr. Latsoucabe Fall, Regional Manager, World Energy Council. Jonathan Monken, Senior Director Electricity Infrastructure Policy, PJM Interconnection USA. 	
12:45 – 13:00	Prayer and Tea Break for Exhibition Visit and Product Showcase 1	
27 th October 2019 13:00 – 14:45	Session A1: RENEWABLE ENERGY & RENEWABLE POWER FOR THE GULF STATES	Tutorial
	A101 Techno-Economic Studies for Connecting 1000 MW Photovoltaic (PV) Power Plant to Oman Grid at Manah & Adam, Mr. Ahmed Sulaiyam Khalfan Al Omairi, Oman Electricity Transmission Company	Tutorial 1: Designing Substation Grade OT Cyber Security Solution.
	A102 Integration of 400MW Duqum Wind Farm in the Main Interconnection Transmission System (MITS), Mr. Abdullah Al Habsi, Oman Electricity Transmission Company	Presented by: Husam Ahmed – Regional Technical Manager – MENA, SEL Middle East.
	A103 The Impact of Wind Turbine Control Parameters on Power System Stability, Mr. Anwar Al Harthi, Oman Electricity Transmission Company	
	A104 Security Economic Dispatch of Power System with Renewable Energy Using Biogeography Based Optimization, Mr. MUSLEH ALAMERI, SEC	Tutorial 2: Grid Resilience
	A105 Abu Dhabi Power Sector Readiness for Baraka Nuclear Plant First Unit Power Assentation Test (PAT), Mr. Hamidullah Siddiqui, Transco	Presented by:
	A106 Evaluation of Solar PV Capacity Credit in the Main Interconnected System of Oman, Miss. Omaima Ali Nasser Al Shukaili, Sultan Qaboos University	Jonathon Monken, Senior Director, System Resiliency, PJM Interconnection
	A107 DEVELOPMENT OF RENEWABLE ENERGY SOLOTIONS, Miss. Bedour Al-Sharrah, Public Authority for Housing Welfare	
14:45	Close of Day and Lunch	
20:00 – 22:00	Gala Dinner	

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		TRACK – A	TRACK - B
28th October 2019 09:00 – 10:45	Session A2: SYSTEM OPERATION & CONTROL		Session B1: ASSET MANAGEMENT FOR POWER SYSTEMS / TRANSFORMER DESIGN, MANUFACTURING, LIFE CYCLE AND PERFORMANCE
	A201 Dynamic interaction of big Static VAR compensators (SVC's) and their impact on the Saudi network- a case study, <i>Mr. Muhammad Ijaz, Saudi Electricity Company</i>		B101 Risk-Based Decision Making Strategy: Mazoon Electricity Company Practice, <i>Mr. MOHAMMED SAIF ALI ALWARDI, MAZOOON ELECTRICITY COMPANY</i>
	A202 Inrush Current Transient Elimination of Big 380/230kV, 750MVA Transformer Using Controlled Switching of Residual Flux of the Transformer Core, <i>Mr. Muhammad Haris Khan , Saudi Electricity Company</i>		B102 Implementation of Travelling Wave Fault Locator in GCCIA and Innovation utilization of the system, <i>Mr. ALAA RAHMA, GCCIA</i>
	A203 Impact of Tropical Cyclone “Mekunu” on Dhofar Power System Operation, <i>Mr. Ammar Alyafai, Oman Electricity Transmission Company</i>		B103 Revamping of KAHRAMAA Electricity Transmission Network Specifications for Life-cycle Cost optimization, <i>Mr. Abdulla Al-Qahtani, KAHRAMAA</i>
	A204 Reliability of GCC Interconnector System Operation with Future Integration of Renewable Energy Sources in GCC Power Grids, <i>Mr. Talal Alshaikh, GCCIA</i>		B104 Power Transformer Reliability Enhancement with Introduction of Dissolved Gas Analysis (DGA) of Cable Boxes oil - Experience of KAHRAMAA, <i>Mr. Zuhair Al Shaiba, KAHRAMAA</i>
	A205 Increasing Network Security and Stability by means of Power Plant Measurements – Study Case in Oman, <i>Mr. Jose Gomez, DigSILENT</i>		B105 Partial Discharge Monitoring System using UHF Sensors for Power Transformer, <i>Mr. Mohaideen Abdul Khadher, APM-Technologies.INC</i>
	A206 Investigation of A Total Power System Blackout at Dhofar Grid in Oman, <i>Mr. Husam Malik Alnahari Alyafai, Oman Electricity Transmission company</i>		B106 Transformer Turns Ratio Test: Beyond the basic facts, <i>Mr. Jaffer Aldurazi, Megger</i>
	A207 Investigation & Control of Short Circuit Currents in Oman Transmission Network, <i>Mr. Maktoum Rashid Said Al Housni, Oman Electricity Transmission Company</i>		B107 Things to consider when specifying an online DGA monitoring device, <i>Mr. Teemu Auronen, VAISALA</i>
10:00-11:15		Poster Session No. 1	
10:45– 11:15		Tea Break for Exhibition Visit , Poster Session 1, and Product Showcase 2	
28th October 2019 11:15 – 13:00	Session A3: ELECTRICITY MARKET & REGULATION		Session B2: OVERHEAD LINES & INSULATED CABLES
	A301 Prerequisites for the Introduction of Bilateral Contracts in a non-regulated Electricity Market Sector, <i>Mr. SALMAN MOHAMMED A ALOWAIFI, Saudi Electricity Company</i>		B201 Cable Termination Failure Investigation in Mazoon Electricity Company Network, <i>Mr. AHMED HAMED AL QANNUBI, MAZOOON ELECTRICITY COMPANY</i>
	A302 OETC requirements of IT system for Spot Market and Renewable Energy, <i>Mr. AWF Al-Mamari, Oman Electricity Transmission Company</i>		B202 400kV XLPE Underground Cables Service Experience with Different International Manufacturers in Qatar, <i>Mr. Ahmad Ali Alkuwari, KAHRAMAA</i>
	A303 An Analysis on Potential Saudi Arabian Grid Code Amendments upon the Introduction of KSA Competitive Electricity Market (CEM) regime., <i>Mr. Abdullah Mubarak Al-Odhaiani, Saudi Electricity Company - National Grid</i>		B203 PERFORMANCE OF EHV POWER CABLE ACCESSORIES IN SAUDI ARABIA, <i>Mr. ABDULLAH ALDHUWAIAN , Saudi Electricity Company</i>
	A304 Trans-boundary Energy and Electricity Markets in the MENA Region, <i>Dr. Kaifeng Yu, Global Energy Interconnection Development and Cooperation Organization</i>		B204 Key selection criteria for silicone coating applied on overhead line insulators, <i>Mr. Fabien Virlogeux, Sediver</i>

	A305 Emergence of a Competitive Wholesale Market in Oman, Dr. Sami AMMARI, General Electric	B205 EFFECTS IN UPGRADING FAMILY OF 380KV DC OVERHEAD TRANSMISSION LINES LATTICE STEEL STRUCTURES IN THE KINGDOM OF SAUDI ARABIA, Mr. ELMER GABINETE, SAUDI ELECTRICITY COMPANY
	A306 Strategy for Northeast Asia Power System Interconnection: Power Trade and Regulation, Mr. Philippe LIENHART, EDF	B206 CASE STUDY FOR PARALLEL LINE RESONANCE IN OETC 400kV NETWORK, Mr. Anilkumar Ravat, Oman Electricity Transmission Company
	A307 Energy Transition and Future Electricity Market in GCC, Mr. Hamidullah Siddiqui, Transco	B207 Insight of power cable and accessories testing and in-service failure, Miss. Hong He, DNV GL
12:00-13:15 Poster Session No.2		
13:00 – 13:30 Prayer and Tea Break for Exhibition Visit and Product Showcase 3		
28th October 2019 13:30 – 15:00	TRACK - A	TRACK - B
	Session A4: SUBSTATIONS, SWITCHGEAR & HV EQUIPMENT	Session B3: SYSTEM DEVELOPMENT & ECONOMICS
	A401 Parallel Operation of Inter Connection Transformers with Dissimilar Configuration and Divergent Parameters, Mr. Ahmad Ali Alkuwari, KAHRAMAA	B301 Benchmarking SEC Planning Criteria Against Worldwide Practices, Mr. ABDULLAH SAEED AL-SHEHRI, Saudi Electricity Company
	A402 Composite Insulators Properties under 1000 h Experimental and Actual Field Tests, Mr. Khaled Y. Al-Soufi, KFUPM	B302 A scenario development methodology for robust grid planning in the GCC context, Mr. Tariq Rashed Al Otaibi, National Grid SA
	A403 Design and Application of 160kV Mechanical HVDC Circuit Breaker, Mr. Yishun Cen, Sieyuan .Electric Co. Ltd	B303 Technical Evaluation of 400 kV Interconnector Between North and South Grid of Oman, Mr. Mohamed Al Hasni, Oman Electricity Transmission Company
	A404 Software-Defined Networking Reinforces Security and Performance in Operational Technology Communications Networks, Mr. ANWAR HABEEB MOINUDEEN, SCHWEITZER ENGINEERING LABORATORY	B304 Demand Shaping Study for GCC Countries, Mr. Ali Al-Ebrahim, GCC Interconnection Authority
	A405 A biodegradable low viscosity insulating oil for hot climates, Mr. Carl Wolmarans, Nynas AB Middle East	B305 Optimal Network Expansion Methodology Based On Differential Evolution Optimization, Mr. Jaber Alshehri, National Grid
	A406 Testing GIS circuit breakers with both sides grounded using Current Sensing Method, Mr. Aditya Taneja, OMICRON electronics Middle East	B306 MZEC Demand Forecast Model, Mr. Ahmed Ibrahim Yahya Al Abri, Maroon Electricity Company
15:00 Close of Day		
17:00 – 19:00 GCC Cigre Board of Directors meeting		

Third Day: Tuesday 29th October 2019 (1st Rabi Al-Awwal 1441)		
29th October 2019 09:00 – 10:45	TRACK - A	TRACK - B
	Session A5: DISTRIBUTION SYSTEM	Session B4: SUBSTATION PROTECTION & AUTOMATION
	A501 Designing a System to Minimize Power Losses in Distribution Network, Shamsa AlSarmi, Sultan Qaboos University	B401 Process Bus Busbar Protection, Mr. Abraham Varghese, General Electric
	A502 Owner-Approach to Achieve Best Performance of Critical Lead Acid Battery System, Mr. Tariq Aldawsari, Saudi Aramco	B402 Arc Flash Analysis and Methods to Mitigate Arc Flash Hazard for Different Voltage Levels in Electrical Power System Network, Mr. Mehul Patel, ETAP Automation
	A503 Quasi Dynamic Simulation for the Voltage Control in the Active Networks, Oman Case Study, Mr. Ahmed Al-Nadabi, Oman Electricity Transmission Company	B403 Solving the nightmare of unmanaged user accounts in digitalized industrial environments with Central Account Management according to IEC 62351-8., Mr. Dylan Jenkins, ABB Switzerland
	A504 Using Concrete Poles & Steel Towers In Distribution Networks 33kV & 11kV – Case Study for MZEC Projects, Mr. Hamed Salim Al Thuhli, Mazoon Electricity Company	B404 AUTOMATION AND PROTECTION SYSTEMS FOR DISTRIBUTED GENERATION INTEGRATION IN AL AIN DISTRIBUTION NETWORK, Mr. Velmurugan Mariappan, AADC
	A505 Advance PMU-based Monitoring, Protection and Control for an Active Distribution Network, Dr. Mohd Zamri Che Wanik, Qatar Environment and Energy Research Institute	B405 Main and Backup System Integrity Protection for OETC Dhofar System, Mr. Jacob Varughees, Oman Electricity Transmission Company
	A506 Application of capacitor-less D-STATCOM for harmonic power mitigation distribution network, Dr. Wesam Rohouma, Texas A&M University at Qatar	B406 Improvement of Key Performance Indicators (KPI) for the testing process of an IED, Mr. Michael, OMICRON ELECTRONICS DEUTSCHLAND GMBH
A507 Improving the reliability and security of supply in cultural, heritage and historical zones, May Alnasser, KAHRAMAA		
10:45 – 11:15 Tea Break for Exhibition Visit and Product Showcase 4		
29th Nov. 2019 11:15 – 12:30	TRACK - A	TRACK - B
	Session A6: SMART GRID	Session B5: HVDC FACTS & TECHNOLOGY
	A601 A Novel method of using BESS for controlling system frequency and area control error through AGC integration in Abu Dhabi power network, Mr. Ehtesham Iftikhar, Abu Dhabi transmission and despatch company	B501 Improving HVDC System Availability During Winter Season with Valve Cooling Modifications: A Case Study at Al Fadhili HVDC Station, Mr. Abdullah Al Ghamdi, GCCIA
	A602 Secondary Control of Microgrid using Multi-Agent Systems, Mr. Ahmed Al-Issaei, Ooredoo Oman	B502 Protection of STATCOM systems, Mr. Mikael Halonen, ABB
	A603 False Data Injection Against Nonlinear State Estimation in Smart Grid, Mr. Naif Makki, Saudi Electricity Company/ National Grid	B503 Enhancing Power Transfer Capability in GCCIA Network, Mr. Ossama Noraldin Abdallah Ahmed, Gulf Cooperation Council Interconnection Authority
	A604 Time of day as a service in operational communication networks of power utilities, Mr. Ramon Bächli, ABB	B504 Frequency Stability in Future Power Grids - Challenges and Solutions -, Dr. Ervin Spahic, Siemens, Transmission Solutions
A605 Real Time Egyptian Wide Area Monitoring System (E-WAMS) for Novel Applications in Smart Grid, Dr. Moustafa Eissa, Sultan Qaboos University		
12:30 – 13:15 Prayer and Tea Break		

CLOSING SESSION		
29th October 2019 13:15 – 14:00	<ul style="list-style-type: none"> • GCC Cigre Chairman Closing Statement 13:00 – 13:05 • GCC Cigre Secretary General Announcements 13:05 – 13:15 • Technical Committee Chairman Remarks & Recommendations 13:15 – 13:30 • Open Discussion and final Remarks 13:30 – 13:45 • Closing and Group Photos 13:45 – 14:00 	
	14:00 Conference Close and Lunch	



POSTER SESSIONS

Second Day: Monday 28th October 2019 (29th Safar 1441)

POSTER SESSION No. 1: - 28th Oct. 2019 10:00 – 11:15	
28 th Oct. 2019 10:00 – 11:15	PPS101 A Comparative Analysis between Overhead Transmission Line and Underground Transmission Line in Oman, <i>Hilal Said Hamed Al Hudhaili, Mazoon Electricity Company</i>
	PPS102 Micro Tunneling works for 132kV UGC with Concrete Shaft Protection in 132/33kV Ghala Heights Transmission Project, <i>Qais Rashid Said AL, Oman Electricity Transmission Company</i>
	PPS103 Electric Field Computation Under a Double Circuit 380KV Overhead Transmission Line with a Vertical Configuration, <i>Jaber Alshehri, National Grid</i>
	PPS104 Standardization and Optimization of High Voltage Cables Design, <i>Hisham, Saudi Electricity Company</i>
	PPS105 Energization of 400kV Cable feeders in North al Batinah region at Main Interconnected System (MIS) network, <i>Faisal Salim Hamed Al Ghaithi, OETC</i>
	PPS106 Alternative to lead sheathed cables, <i>Mahdi Abdelkhalek, Oman Cables Industry</i>
	PPS107 Return on experience, HVAC projects with focus on long lengths cable system, <i>Simone Ballare, Prysmian Group</i>
	PPS108 Replacement of Porcelain Insulator to Silicon Rubber Insulator of 220/132kv transmission line in OETC network, <i>Yousuf Ahmed Saleh Al-Hammadi, Oman Electricity Transmission Company</i>
	PPS109 Long-run marginal cost (LRMC) at generation busbar level for Main Interconnected power system of Oman, <i>Al Mukhtar Al Mugheiri, Sultan Qaboos University</i>
	PPS110 Economy of Residential Energy Subsidies under Renewable Energy Target in Saudi Arabia, <i>Fawzi Alorifi, Imam Mohammed Ibn Saud University</i>
	PPS112 Impact of Small Load Variances and High Capacitive Photovoltaic Systems on Electromechanical Equipment in Electrical Distribution Systems, <i>Aaqib Peerzada, Texas A&M University</i>
	PPS113 Performance evaluation of Capacitor-less D-STATCOM for power quality enhancement under dynamic loads, <i>Wesam Rohouma, Texas A&M University at Qatar</i>
	PPS114 Optimal Capacitor Bank placement in KAHRAMAA Distribution Network, <i>MAY ALNASSER, KAHRAMAA</i>
	PPS115 Electricity Distribution System in Sierra Leone – Management Contract Case Study, <i>Bilal Abou El Hassan, Khatib & Alami</i>
	PPS116 Flexibility and Reliability of 230 kV Ring BUS system with 2 generators and two Power company incomers, <i>Siljo Jose, SADAFA</i>
	PPS117 Development of High-Speed Mechanical Switchgear with Vacuum Arc Interruption Technology and Its Application in HVDC Circuit Breaker, <i>Wei Gu, Sieyuan Electric Co., Ltd.</i>
	PPS118 Uprating of substations and existing equipment to increase network capacity by deploying UHV lines, <i>Prasad Puthiyeduth Kuniyil, Saudi Electricity Company</i>
	PPS119 Inrush / Fault Current Detection for Accelerated Fault Clearance to Enhance Transformer Life, <i>Murtada Abualrahi, Megger ME LTD</i>
	PPS120 Innovative testing in full digital substations and complex IEC 61850 automation logic, <i>Mohamed, OMICRON</i>
	PPS122 Innovative approaches for enhancing the service life with reduced risks and optimized costs of Substation Automation Retrofit System Programs, <i>VINAY SARDANA, TRANSCO</i>
	PPS123 TESTING OF COMPLICATED BUS BAR PROTECTION, <i>Murtada Abualrahi, Megger ME LTD</i>
	PPS124 PROCESS-BUS (IEC61850-9-2) PILOT PROJECT: GETTING READY FOR FUTURE, <i>Anilkumar Ravat, Oman Electricity Transmission Company</i>
	PPS125 Experiences in Commissioning a 400kV High Voltage Reactor with the IEC 61850 Standard, <i>Mohammad Tariq, Megger</i>
	PPS126 Settings Management for Protection Relays - A Powerful New Enhancement for Specialized Asset Maintenance Management Systems, <i>Stefan Schlichting, OMICRON electronics GmbH</i>
	PPS127 Safe and robust operation of teleprotection over a next generation telecoms network, <i>Francis Baestaens, Mr.</i>

Second Day: Monday 28th October 2019 (29th Safar 1441)

POSTER SESSION No. 2: - 28th Oct. 2019 12:00 – 13:15

PPS201 Corrosive Oil & Mitigation Techniques, Addition of metal passivators - Kahramaa Experience, <i>Mohammed Yousuf Alkubaisi, KAHRAMAA</i>
PPS202 On-line monitoring with the TransfoBox of EDF - Description and cases, <i>THOMAS Franck, EDF</i>
PPS203 An Expanded Fault Detection, Location and Clearing Strategy Application to a Hybrid Wind Energy integrated to MTDC, <i>JOHN KWEKU AMOO-OTOO, SAUDI ARAMCO</i>
PPS204 Offshore wind potential and wind atlas over Oman Maritime Zone, <i>Sultan, Mazoon Electricity Company</i>
PPS205 Assessment of Connecting Waste to Energy IPP to Oman Main Interconnected Transmission System, <i>Hilal Mohammed Al Zadjali, Oman Electricity Transmission Company (OETC)</i>
PPS207 Power System Studies for Wind Farm Interconnections in the GCC, <i>Gergo Varhegyi, Siemens LLC.</i>
PPS208 Sensorless Current MPPT Technique for PV Energy Harvesting Systems in the GCC, <i>Morcos Metry, Texas A&M University</i>
PPS209 Towards The Development of Sustainable Electricity Systems Barriers, Driving Forces and Policies for Energy storage in Sultanate of Oman, <i>Ahmed Zayid AlShaqi, Mazoon Electricity Company</i>
PPS210 Future view for electric vehicle infrastructure, <i>MAZEN ALMASRI, KAHRAMAA</i>
PPS211 Challenges of Renewable Energy in Oman, <i>Malik Salim Als Habibi, OETC</i>
PPS212 EDF innovative Microgrid Solution for Isolated Areas, <i>Philippe LIENHART, EDF R&D</i>
PPS213 Consumer Centric Smart Grid Resource Allocation using Multi-Criteria Decision Making, <i>Sultan, Mazoon Electricity Company</i>
PPS214 Design of PSSs Based PMUs to Enhance the Stability of Inter-Area Oscillations in GCC Interconnected Power Grid, <i>Khaled, Senior Member</i>
PPS215 Adopting a Data-driven Approach to Optimise Replacement Policies and Maintenance Plans, <i>Koen Clerckx, Elia Grid International</i>
PPS216 Maintenance practices comparison exercise amongst GCC Transmission Utilities, <i>Abdulla Hasan, GCCIA</i>
PPS217 LIFE CYCLE COST (LCC) ASSESSMENT FOR (GIS) GAS INSULATED SWITCHGEAR SUBSTATIONS, <i>Rashid Sarhan Rashid Al-Mughairi, Oman Electricity Transmission Company</i>
PPS219 Development of Asset Models for Asset Performance thanks to Machine Learning, <i>Thibaut Mauffrey, General Electric</i>
PPS220 Improving Operation and maintenance of Substation Equipment's using Operational data from Protection Relays, <i>Mohamed Nabil Ali, Schweitzer Engineering Laboratories, Inc.</i>
PPS221 Revolutionising the life cycle optimisation of assets using advanced modelling and cloud computing techniques, <i>Oliver Francis, Fugro</i>
PPS222 Implementation of Web Based Asset Management System for Protection Relays and Substation Equipment, <i>Dr A. A. Maqrashi, DigSILENT Middle East LLC</i>
PPS223 Review of Spinning Reserve Sharing Criteria for GCC Combined System, <i>Ikram Rahim, GCCIA</i>
PPS224 A harmonised approach to under frequency load shedding in the Nordic power system, <i>Graeme Hutchison, Ramboll</i>
PPS225 The GCC Power System- GCCIA Network Splitting and Methodology of Re-synchronization, <i>Bandar Faraj Almarri, GCCIA</i>
PPS226 New Developed Superconducting Fault Current Limiters for Solving High Fault Levels Problem in Omani Electricity Transmission Grid, <i>Abdelsalam M. A. Elhaffar, Sultan Qaboos University</i>
PPS227 Wind and Solar Integration – An Operational Impact View Point, <i>Jerry Su, General Electric</i>
PPS228 Optimal Location of Facts Devices to Performance Enhancement of Jeddah 380kV Power Systems, <i>Abood Saad AL-Dossary, Saudi Electrisety Company</i>
PPS229 Phase-shifting transformers (PST), <i>Fatmah Obaid Al Salami, Transco</i>
PPS230 A new approach for grid loss reduction in the presence of photovoltaic systems using transformer tap changers, <i>Yasin Hossein-Doost, MonenCo Iran</i>

28th Oct. 2019
12:00 – 13:15