

**E\_GCC POWER 2021**  
**25<sup>th</sup> – 27<sup>th</sup> October 2021/ 19<sup>th</sup> -21<sup>st</sup> Rabi Al-Awwal, 1443**

**Conference Program**  
**TIME BASED ON UTC + 3 (DOHA LOCAL TIME)**

**The First Day: Monday 25<sup>th</sup> October 2021 (19<sup>th</sup> Rabi-AlAwwal 1443)**

**Conference Registration & Reception 9:00 - 10:00**

**Opening Ceremony: (AUDITORIUM A & B)**

- Welcome statement and Holy Quran 10:00 - 10:05
- Patronage Address (H.E. GCC Asst. Secretary General) 10:05 - 10:10
- GCC Cigre Address: H.E. Chairman of GCC CIGRE Board of Directors: 10:10 - 10:15
- Cigre Address: H.E. Cigre Secretary General 10:15 - 10:20
- Main sponsors Address: 10:20 - 10:30

**The First Day: Monday 25<sup>th</sup> October 2021 (19<sup>th</sup> Rabi-AlAwwal 1443)**

10:30- 12:00	Tutorial1: (AUDITORIUM A & B) <b>Title:</b> <i>Application of non-SF6 gases or gas-mixtures in medium voltage and high voltage gas-insulated switchgear</i> <b>Speaker:</b> <i>Maik Hyrenbach and Günter Kachelrieß</i>
12:00 – 12:30	BREAK & EXHIBITION VISIT

**The First Day: Monday 25<sup>th</sup> October 2021 (19<sup>th</sup> Rabi-AlAwwal 1443)**

<b>Session A1: ELECTRICITY MARKET &amp; REGULATION (AUDITORIUM A)</b> <b>Chaired by:</b> Eng. Easa Al-Zarooni <b>Co-Chaired by:</b> Dr. Nasser Al-Shahrani	
25th October 2021 12:30 – 14:00	<b>A101</b> <i>SYNERGIES OF RENEWABLES DEVELOPMENT AND GRID INTERCONNECTION IN THE MIDDLE EAST.</i> By: Kaifeng Yu, Global Energy Interconnection Development and Cooperation Organization: United Arab Emirates
	<b>A102</b> <i>Remuneration and Market Schemes for Decentralized Renewable Energy Systems in the Kingdom of Saudi Arabia: A Preparation for the Energy Sector Transformation.</i> By: Vincent Thevenin, Elia Grid International: Belgium
	<b>A103</b> <i>Balancing Mechanism for GCC Countries.</i> By: Abdulrahman Mohammed Bati Alkelbi, Saudi Electricity Company: Saudi Arabia
	<b>A104</b> <i>Assessment of power trading opportunities in the GCC Region.</i> By: Yousef O. Al-Marwan, GCC Interconnection Authority: Saudi Arabia
	<b>A105</b> <i>Facilitating Power Trading in the GCC..</i> By: Tarek Fawzy, Energy Exemplar: United Kingdom
<b>Q&amp;A</b>	
<b>12:30- 15:00</b> Tutorial2: (AUDITORIUM B) <b>Title:</b> <i>Protection and local control of HVDC grids</i> <b>Speaker:</b> <i>Eng. Kees Koreman &amp; Dr. Willem Leterme.</i> <b>Description:</b> <i>First, the fault response of converters with and without fault blocking capability is compared. Then, various strategies for clearing DC-side faults are discussed. Thereafter, various principles in fault detection and localisation are explained and compared. Finally, the basic operation of DC Circuit Breakers is described.</i>	
<b>15:00</b> END OF DAY ONE	

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**Second Day: Tuesday 26th October 2021 (20th Rabi Al-Awwal 1443)**

		<b>TRACK – A (AUDITORIUM A)</b>		<b>TRACK – B (AUDITORIUM B)</b>	
26th October 2021 10:00 – 11:45	<b>Session A2: SYSTEM OPERATION &amp; CONTROL</b> <b>Chaired by:</b> Ahmad AL-ZHRANI <b>Co-Chaired by:</b> Hashim AL-ZHRANI		<b>Session B2: Asset Management for Power Systems</b> <b>Chaired by:</b> Dr. Bruce Stedall <b>Co-Chaired by:</b> Sana AL-Ghareeb		
	<b>A201</b>	<b>Maintaining of GCCIA Control Centers to Attain Full Operability of the interconnected system.</b> By: Talal Alshaikh, GCCIA: Saudi Arabia	<b>B201</b>	<b>Supporting Asset Management with date based solutions.</b> By: Alexei Babizki, MR: Germany	
	<b>A202</b>	<b>Resonance Overvoltage Study on Shunt Compensated EHV Transmission Line: Hail-3 to Jouf-1 Case Study.</b> By: Mohammed S. Al Dahasi, Saudi Electricity Company: Saudi Arabia	<b>B202</b>	<b>Utilization of Artificial Neural Network for Condition Assessment of Power Transformers.</b> By: Dr Mohamed Khalil, Doble Engineering company: Poland	
	<b>A203</b>	<b>Enhancing Operational Studies through Automatic Exchange of Network Models among the GCC Countries Using CIM.</b> By: Ahmed Abdullah ALJaafari, GCCIA: Saudi Arabia	<b>B203</b>	<b>An Asset Performance Tool using Data Analytics for Transco's Power Transmission Network.</b> By: Balasubramanian Nainar, Transco: United Arab Emirates	
	<b>A204</b>	<b>AGC Enhancement for Mitigation of PV Intermittence and Reducing Unscheduled Energy Deviations.</b> By: Hany Salah Ashour Abdelwahed, Transco: United Arab Emirates	<b>B204</b>	<b>PARTIAL DISCHARGE MONITORING FOR AUTOMATIC DIAGNOSIS.</b> By: Javier Ortego, Ampacimon: France	
	<b>A205</b>	<b>Implementing Six Sigma for Improving PCC Performance.</b> By: Hussam Alomari, National Grid SA: Saudi Arabia	<b>B205</b>	<b>OFF- AND ON-LINE PARTIAL DISCHARGE TESTS TO ASSESS THE CONDITION OF GENERATOR STATOR WINDING INSULATION.</b> By: Bogdan Gorgan,OMICRON Energy Solutions GmbH: Germany	
	<b>A206</b>	<b>Smart Automatic Voltage Control Scheme for an Island Power Grid.</b> By: Michael Burke, Saudi Aramco: Saudi Arabia	<b>B206</b>	<b>Real time insights from digital enterprise for your secondary assets.</b> By: Peter Kreutzer, hitachi energy: Switzerland	
	<b>Q&amp;A</b>		<b>Q&amp;A</b>		
11:45– 12:15 Break for Exhibition Visit, POSTER SESSION (EXHIBITION HALL), Hitachi ABB solutions and offerings (AUDITORIUM A) OTN Systems (AUDITORIUM B)					
		<b>TRACK – A (AUDITORIUM A)</b>		<b>TRACK – B (AUDITORIUM B)</b>	
		<b>Session A3: RENEWABLE ENERGY AND NUCLEAR POWER FOR THE GULF STATES</b> <b>Chaired by:</b> Sana AL-GHAREEB		<b>Session B3: System Development &amp; Economics</b> <b>Chaired by:</b> Mohammad Al-Sheikh <b>Co-Chaired by:</b> Fahad Al Zahrani	
26th October 2021 12:15 – 13:30	<b>A301</b>	<b>Overview of Energy Storage Technologies for Renewable Energy Powered RO-Desalination Plants in GCC region.</b> By: Vishal Vora, Electrical Research and Development Association (ERDA): India	<b>B301</b>	<b>Optimizing the generation mix to ensure system adequacy for scenarios with very high RES shares for the Kingdom of Saudi Arabia.</b> By: Malek M. Al-Hajji, Saudi Electricity Company: Saudi Arabia	
	<b>A302</b>	<b>Techno-economic impact of KSA's 2030 renewable integration targets.</b> By: Mohamed A. Al Zaid, Saudi Electricity Company: Saudi Arabia	<b>B302</b>	<b>Grid development strategies for the optimal integration of very high RES shares in the high voltage grid of the Kingdom of Saudi Arabia.</b> By: Malek M. Al-Hajji, Saudi Electricity Company: Saudi Arabia	
	<b>A303</b>	<b>Grid Compliance Study for the First Large-Scale Wind Farm in KSA.</b> By: Jamal Yasin, Saudi Electricity Company: Saudi Arabia	<b>B303</b>	<b>Role and importance of multiple neighboring power system interconnections for decarbonized utility power system.</b> By: M. Fayyaz Akram, POWER-tek Global Inc.: Canada	
	<b>A304</b>	<b>The Impact of Large Scale RES on the Saudi Electricity Transmission System.</b> By: Jamal Yasin, Saudi Electricity Company: Saudi Arabia	<b>B304</b>	<b>Novel cost-benefit-analysis approach in power system planning.</b> By: Sebastian	

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26th October 2021 13:45 – 15:00				Stepanescu, Elia Grid International: United Arab Emirates
	<b>A305</b>	<b>Application of Variable Shunt Reactor in the Middle East: OLTC brings wider regulation range.</b> By: Ajay Krishnan Nilakantan, Maschinenfabrik Reinhausen GmbH: Germany	<b>B305</b>	<b>Integration of Superconducting Fault Current Limiter in the inadmissible severe high level short circuit fault.</b> By: Abdullah Ali Al Habsi, Oman Electricity Transmission Company: Oman
	<b>Q&amp;A</b>		<b>Q&amp;A</b>	
<b>13:30- 13:45 Break for Exhibition Visit, and Product Showcase</b>				

26th October 2021 13:45 – 15:00	<b>Session A4: Substations, Switchgear and HV Equipment</b> <b>Chaired by:</b> Mr. Koji Kawakita <b>Co-Chaired by:</b> Abdulrahman AHLI		<b>Session B4: Distribution Systems &amp;HVDC and FACTS Technology</b> <b>Chaired by:</b> Kamel Al-Shehabi <b>Co-Chaired by:</b> Abdulaziz Al-Shafai	
	<b>A401</b>	<b>Condition assessment of bushings in the field.</b> By: Evgenii Ermakov, ABB Power Grids Sweden AB: Sweden	<b>B401</b>	<b>Advanced optimization tool for reliability improvement of MV distribution systems through feeder automation.</b> By: Stanislav Yordanov, Tractebel Impact: Belgium
	<b>A402</b>	<b>Impact of HV Disconnect Switch Failures on the Reliability of Power Systems.</b> By: Sultan Mohammad, Saudi Aramco: Saudi Arabia	<b>B402</b>	<b>Wide-Area Frequency based Power Sharing Scheme in Hybrid Multiple Subgrids.</b> By: N.V.N. JAGADISH, Saudi Electricity Company/Distribution: Saudi Arabia
	<b>A403</b>	<b>Project experience of a substation with SF6-free GIS, LPITs and IEC 61850 process bus technology.</b> By: Thomas Neumeier, Siemens SI DG: Germany	<b>B403</b>	<b>UPFC PLUS – Dynamic Load flow Management for volatile unstable Transmission Grids.</b> By: Christian Pfeifer, Siemens Energy: United Arab Emirates
	<b>A404</b>	<b>Retrofit of 420kV GILs with a SF6-free gas, the fluoronitrile.</b> By: MAUFFREY, General Electric: France	<b>B404</b>	<b>Thyristor Quardri valve Fire incident: A Case Study at GCCIA Al Fadhili HVDC.</b> By: Jayakumar Muthsamy, GCCIA: Saudi Arabia
	<b>A405</b>	<b>Connection Considerations for Voltage Transformers in Resistance-Grounded Distribution Systemsof 420kV GILs with a SF6-free gas, the fluoronitrile.</b> By: Fowzan S.Fowzan, Saudi Aramco: Saudi Arabia		
<b>Q&amp;A</b>		<b>Q&amp;A</b>		
<b>15:00 END OF DAY TWO</b>				

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Third Day: Wednesday 27th October 2021 (21 <sup>ST</sup> Rabi Al-Awwal 1443)			
TRACK - A (AUDITORIUM A)		TRACK - B (AUDITORIUM B)	
Session A5: SMART GRIDS <b>Chaired by:</b> Mohamed Al Muaili <b>Co-Chaired by:</b> Abdulaziz Al-Shafai		Session B5: SUBSTATION PROTECTION & AUTOMATION <b>Chaired by:</b> Haifaa Al-Mteiri <b>Co-Chaired by:</b> Alaa Rahmaa	
A501	<i>Digitalization of Utilities: tale of a successful journey to become a Digital TSO.</i> By: Antoine Mathieu, Elia Grid International: Belgium	B501	<i>Pilot Experience of IEC 61850 real-time communication between Al-Dhafra and ASWG 400kV digital substations enabling new protection and automation concepts in the TRANSCO network..</i> By: Peter Kreutzer, hitachi energy: Switzerland
A502	<i>Innovative methods for testing PMUs in Smart Grids.</i> By: Mohamed Ali, OMICRON: Bahrain	B502	<i>Defining a Wide Area Protection System Using 5G Communication Technology.</i> By: Mohand Ouamer NAIT BELAID, EDF SA: France
A503	<i>Emerging Role of Smart Building Integration in System Operation and Control.</i> By: Lavjit Singh, Elia Grid International: Belgium	B503	<i>Case study of a specific issue of distance protection in relation to simultaneous faults and auto reclosure on double circuit radial feeders.</i> By: Haifaa AlMteiri, TRANSCO: United Arab Emirates
A504	<i>Intelligent Voltage Limit Violation Prediction for Active Distribution Network.</i> By: Mohd Zamri Che Wanik, Qatar Environment and Energy Research Institute: Qatar	B504	<i>Frequency Measurement and its Applications – Requirements and Testing.</i> By: Sameh Eldmrdash, OMICRON electronics Deutschland GmbH: Germany
A505	<i>Energy Storage System.</i> By: ABDULHADI ALQARNI, Alfanar: Saudi Arabia	B505	<i>Research on and Application of Key Technologies for Intelligent Operation and Maintenance of GIS Substation.</i> By: Jun Shen, Sieyuan Electric Co. Ltd.: China
A506	<i>Talk-back Seals: Guardian of energy meters.</i> By: HC SHARMA, TATA POWER - DDL: India	B506	<i>ADVANCED COGENERATION ISLANDING SYSTEM.</i> By: Muhannad Almulla, Saudi Aramco: Saudi Arabia
Q&A		Q&A	
11:30 – 12:00 Break for Exhibition Visit and Product Showcase			
TRACK - A (AUDITORIUM A)		TRACK - B (AUDITORIUM B)	
Session A6: OVERHEAD LINES AND INSULATED CABLES <b>Chaired by:</b> Aqeel AL-AWADY <b>Co-Chaired by:</b> Fahad AL-ZAHRANI		Session B6: TRANSFORMER DESIGN, MANUFACTURING, LIFE CYCLE AND PERFORMANCE <b>Chaired by:</b> Tarik AL-ABRI <b>Co-Chaired by:</b> Abdulla AL-GHAMDI	
A601	<i>LLDPE/MDPE performance as inner and outer sheath.</i> By: Mohamad Nabih Al Saati, RCGC: Saudi Arabia	B601	<i>STRAY-FLUX HEATING IN TANK OF HIGH IMPEDANCE, LARGE CAPACITY TRANSFORMERS.</i> By: MUKUNDAN P.NARAYANAN NAMBIAR, DUBAI ELECTRICITY AND WATER AUTHORITY: United Arab Emirates
A602	<i>Field &amp; laboratory Assessment of RTV Coated Insulators in Harsh Desert Environment..</i> By: Ahmed AlThagafi, GCCIA: Saudi Arabia	B602	<i>Fault Diagnosis of Transformer using Dissolved Gas Analysis Technique - Case Study.</i> By: Manjusha S. Nambiar, Electrical Research & Development Association: India
A603	<i>Best Practices of High Voltage Underground Cables Maintenance.</i> By: Sultan Al Katiri, TRANSCO: United Arab Emirates	B603	<i>PRACTICAL APPROACH TO TRANSFORMER WINDING CONDITION ASSESSMENT – FIELD PERSPECTIVE.</i> By: Jaffer Aldurazi, Megger: Bahrain
A604	<i>Tangent Delta in Polymeric HV Cables.</i> By: Mohamad Nabih Al Saati, RCGC: Saudi Arabia	B604	<i>QUALITY ASSURANCE OF TRANSFORMERS.</i> By: Ronnie Minhaz, Transformer Consulting Services Inc.: Canada
A605	<i>Insulation Performance Analysis of Field Aged and New MV XLPE Cables Using Various Diagnostic Techniques.</i> By: Yousef Ghazi	B605	<i>Failure Analysis of Power Transformers Tested as per IEC: 60076 (ERDA's Experience).</i> By: Kapil J Sharma, ERDA: India

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<b>27<sup>th</sup> October 2021</b> 14:00 – 14:30		Alonazi, National Grid SA - Saudi Electricity Company: Saudi Arabia	
	<b>A606</b>	<b><i>Operational Evaluation of RTV Coating Performance over 17 years on the Coastal Area at Jubail-SA.</i></b> By: Jaafar Al Thawab, Saudi Electricity Company - National Grid SA: Saudi Arabia	
	<b>Q&amp;A</b>		<b>Q&amp;A</b>
<b>13:30 – 14:00 Break for Exhibition Visit and Product Showcase</b>			
<b>CLOSING SESSION (AUDITORIUM A &amp; B)</b>			
	<ul style="list-style-type: none"> <li>• GCC Cigre Chairman Closing Statement <span style="float: right;">14:00 – 14:05</span></li> <li>• Cigre Secretary General Closing Statement <span style="float: right;">14:05 – 14:10</span></li> <li>• GCC Cigre Secretary General Announcements <span style="float: right;">14:10 – 14:15</span></li> <li>• Technical Committee Chairman Remarks &amp; Recommendations <span style="float: right;">14:15 – 14:28</span></li> <li>• Closing <span style="float: right;">14:28 – 14:30</span></li> </ul>		
<b>14:30 End of Conference</b>			

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Second Day: **Tuesday 26th October 2021 (20th Rabi Al-Awwal 1443)**

**POSTERS (EXHIBITION HALL)**

<b>PPS01 - Transformer Online Monitoring Under N-1 Contingency: Is it beneficial?.</b> By: Bhaba Priyo Das, Hitachi ABB: Singapore
<b>PPS02 - Enhancement of asset and grid information governance through a reference data model management towards establishing Digital Authority.</b> By: Dr. Jayaprakash Ponraj , TRANSCO: United Arab Emirates
<b>PPS03 - Online Condition Monitoring Techniques for Metal Oxide Surge Arresters.</b> By: Anil Subhashchandra Khopkar , Electrical Research And Development Association (ERDA): India
<b>PPS04 - GIS Benefits &amp; ROI: A CASE STUDY.</b> By: Malika Saif Al Amri, MEDC: Oman
<b>PPS05 - Mitigating threats and strengthening the Grid with AI-based Inspection Programs.</b> By: Sylvain Mandrau , GE Digital: France
<b>PPS06 - Virtualization as an enabler for digital substation deployment.</b> By: Ben Frazer, Hitachi Power Grids: United Arab Emirates
<b>PPS07 - PREVENTION IN THE MAIN ELEMENTS OF THE POWER SYSTEM.</b> By: Jorge Cardenas, Adneli Consultant: Spain
<b>PPS08- A method for Accurate balanced Radial Distribution System Parameter estimation.</b> By: Mahmoud Aly , Arab Contractors : Egypt
<b>PPS09 - Regional Interconnections: best practices and lessons learnt.</b> By: LIENHART, EDF: France
<b>PPS10 - Economic Optimization of Cable Conductor Size by Studying its Expected Lifetime at Elevated Operating Temperatures.</b> By: Mohammed Aly Khalil Askar , GCC Electrical Testing Laboratory: Saudi Arabia
<b>PPS11 - Dynamic Line Rating with forecasts and SCADA integration.</b> By: Jean-Louis Repetto, Ampacimon: France
<b>PPS12 - Root Cause Investigation of Failed Power Cable Located in Coastal Area.</b> By: Dr. Nitin Shingne, Electrical Research and Development Association (ERDA): India
<b>PPS13 - A Field Analysis of New Overhead Line Conductor Coatings to Increase Ampacity/Reduce Power Losses in Desert Environment: Performance and Durability Assessments.</b> By: Dr Niall Coogan , AssetCool: United Kingdom
<b>PPS14 - Conception and creation of the power system connecting the new Hatta hydro power plant.</b> By: Paul PHAM , edf: United Arab Emirates
<b>PPS15 - Wind power operation in power systems: A review of operational philosophy for Dhofar Wind Farm.</b> By: Ammar Suhail Mohammed Al-Muhandis Al-Yafai , Oman Electricity Transmission Company: Oman
<b>PPS16 - Maintenance work order management tool (Desktop &amp; Mobile Solution).</b> By: Haitham Abdullah, Oman Electricity Transmesion Company: Oman
<b>PPS17 - Detection of HIF using Harmonics signature.</b> By: Mohamad Dhafer Alshahrani, saudi electric co :Saudi Arabia
<b>PPS18 - Protection coordination and special protection systems for interconnected power systems using real time communication channels.</b> By: Ramon Bächli , ABB: Switzerland
<b>PPS19 - Challenges of UHF PD Monitoring for Three-Phase Encapsulated GIS.</b> By: Fraser Cook , Qualitrol: United Kingdom
<b>PPS20 - Cost-Benefit Analysis and Cases of Study of Battery Energy storage system in Western African Power Pool (WAPP).</b> By: Andrea Mansoldo, DNV GL :United Arab Emirates
<b>PPS21 - Short Circuit Current Challenges in SEC - EOA</b> By Ahmed T. Al-Awami , Malek M. Al-Hajji Ahmed , Saudi Electricity Company :Saudi Arabia
<b>PPS22 - FIRE SAFE HIGH MOISTURE TOLERANT SUPERIOR SYNTHETIC ESTER DIELECTRIC FLUID FOR TRANSFORMERS – A CASE STUDY.</b> By: K. BABURAO, Raj Petro Specialities Pvt Ltd - A Brenntag Group Company: India

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11:45 – 13:30