الشبكات الذكية
Smart Grid

وزارة الطاقة
MINISTRY OF ENERGY

SASG 25

المؤتمر السعودي الثالث عشر للشبكات الذكية

Conference Agenda

15-17 Dec 2025

The Ritz-Carlton, Riyadh

SASG_KSA | www.saudi-sg.com

SASG 25
المؤتمر السعودي الثالث عشر للشبكات الذكية

Under Patronage of:

HRH Prince Abdulaziz bin Salman Al-Saud

Minister of Energy

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SASG 25

المؤتمر السعودي الثالث عشر للشبكات الذكية

Conference Main Topics

- Cyber Security Applications in Smart Grid
- Renewable Energy and Grid Integrations
- Smart Meters and Advanced Solutions for Data Management
- Electric Power System Resilience and Reliability
- Regulatory Aspects and Energy Policies
- Localization of Smart Grid Services and Technologies
- Standards for Smart Grid and Grid Codes
- Energy Efficiency Measures and Methodologies
- Electric Vehicles and Energy Storage
- Artificial Intelligence and Blockchain Studies in Smart Grid
- Technologies in the 4th Industrial Revolution
- International Successful Grid Smart in Practices

SASG 25

المؤتمر السعودي الثالث عشر للشبكات الذكية

Main Goals

- Encourage researchers to present scientific and applied experiences in smart grids.
- Highlight the role of government and private sectors in adopting smart grid concepts and benefiting from global best practices in legislation and strategy.
- Promote investment by transferring and localizing smart meter and network equipment technologies.
- Enhance system efficiency through load management and loss reduction.
- Explore challenges, opportunities, and lessons from countries applying smart applications in electricity networks.
- Advance energy storage and integrate it with conventional and renewable sources.
- Share practices for rationalizing electricity consumption amid rising demand.
- Promote economical power plant operation while ensuring network safety and reliability.

UNDER PATRONAGE

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TECHNICAL WORKSHOPS

Riyadh, Hilton Hotel · Sunday, 14 December

Session One

Workshop1 (AlUla Hall-A)

(NetZero Virtual Power Plant (VPP — 09:00 -10:30 am


Rafat Rob


Yousef Alsulami

aramco

Workshop 2 (AlUla Hall-B)

Energy Efficiency Measures and Methodologies — 09:00- 10:30 am


Mohammad Moin

ALGIHAZ HOLDING الجهاز القابضة

Workshop 3 (Al Diriyah Hall)

Smart, Secure, and Sustainable: Advancing Electrical Grids through "Digitalization and Precision Protection — 09:00- 10:30 am


Kerem Bayram


Joerg Blumschein


Andreas Köenig

SIEMENS

Session Two

Workshop 4 (AlUla Hall-A)

Cybersecurity & The Effect of AI in Securing Automation Systems — 11:00- 12:30 pm


Ahmad Alanzi


Abdulaziz Zarie


Maram Alsofiani

aramco

Workshop 5 (AlUla Hall-B)

Innovating Grid Flexibility: Enabling Future-Proof Energy Systems — 11:00- 12:30 pm


Faris Aljehani


Mohammed Alshiekh


Sami Alalwani


Dr. Atif Alzahrani

DEMA ENERGY

Workshop 6 (Al Diriyah Hall)

Interoperability at the Core of Smart City Evolution: The inteliCITY® Approach — 11:00- 12:30 pm


Dinu Tepes

Part of FLASHNET | Lucy Electric

Session Three

Workshop 7 (AlUla Hall-A)

Distribution & Customer Services in SEC: Journey Toward Smart Grid — 01:00- 02:30 pm


Hossein AlGhawazi


Bakheet Hamdan


Mohammad AlRumaih


Ali Al-Rumaih


Abdulmalik Kamal


Raef Khorami

الشركة السعودية للكهرباء
Saudi Electricity Company

Workshop 8 (AlUla Hall-B)

Payment Structure for Solar PV and Wind IPP Projects — 01:00- 02:30 pm


Hadwan Al-Hadrami

المشتري الرئيس
PRINCIPAL BUYER

Workshop 9 (Al Diriyah Hall)

Role of Battery Energy Storage in Saudi Grid Modernization — 01:00- 02:30 pm

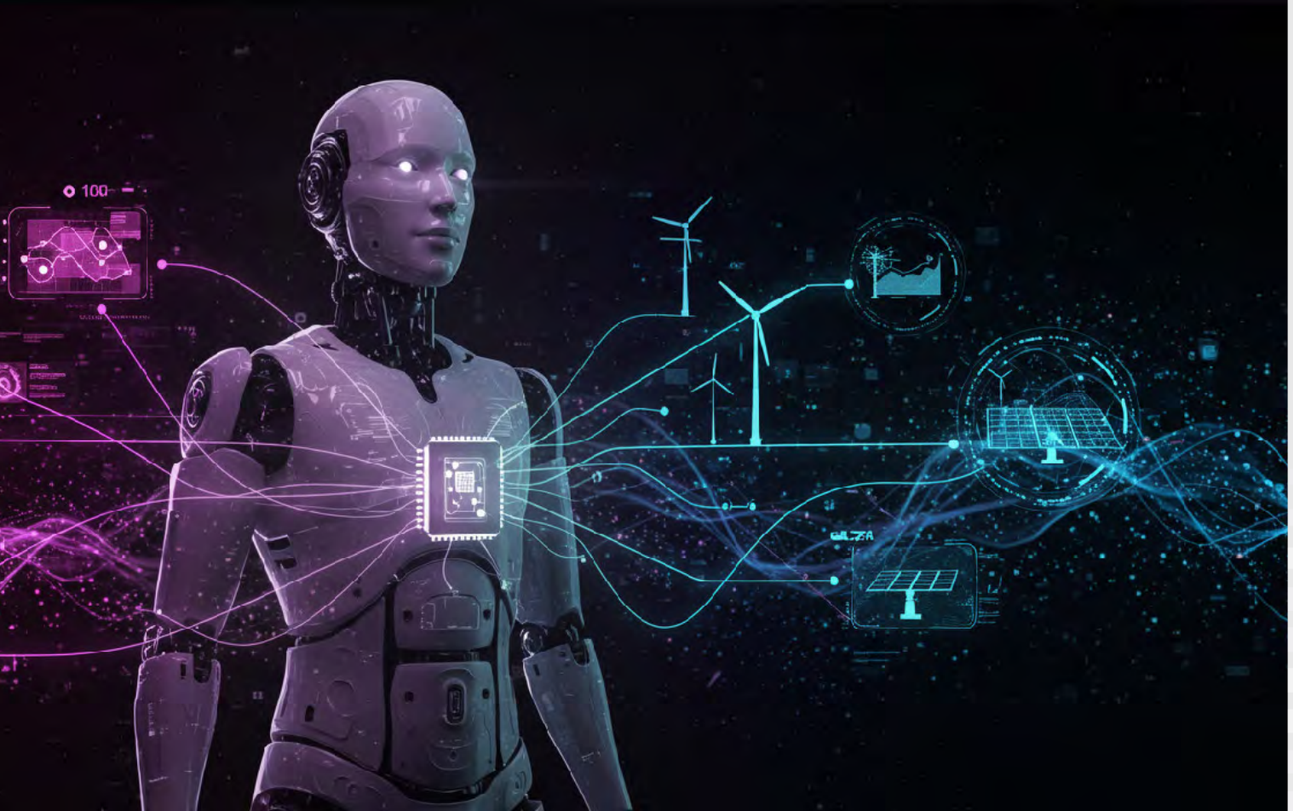

Hassan Farhangi


Mohammed Hael

عناية الطاقة
energycare

Monday, 15 December

Day One



Site Visits

10:00- 12:00 pm

Inauguration of Exhibition

07:00- 07:30 pm

Opening Ceremony

07:30- 09:00 pm

- Royal Anthem
- Holy Qura'an
- Conference Opening Speech
- IEEE Power and Energy Speech
- Ministry of Energy Address
- Signing Ceremony
- Honoring Energy Hakathon Winners
- Honoring the Sponsors
- Opening Panel Session
- Gala Dinner

الشبكات الذكية
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MINISTRY OF ENERGY

System House Factory for Electric Panels Co Site Visit

Where Precision Engineering
Shapes Electric Innovation

15 – 16
December

10:00 AM – 12 00 PM

2nd Industrial City
South Riyadh

ALGIHAZ HOLDING
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الشبكات الذكية
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المؤتمر السعودي الثالث عشر للشبكات الذكية

وزارة الطاقة
MINISTRY OF ENERGY

Saudi Electronic Services Polytechnic Site Visit

Discover How SESP Prepares
the Workforce of Tomorrow

15 – 16
December

10:00 AM – 12 00 PM

SESP Riyadh Branch

SESP
المعهد السعودي التقني لخدمات الكهرباء
SAUDI ELECTRIC SERVICES POLYTECHNIC

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الشبكات الذكية
Smart Grid

SASG 25
المؤتمر السعودي الثالث عشر للشبكات الذكية

وزارة الطاقة
MINISTRY OF ENERGY

Smart Meters Center

Where Smart Metering Powers the Future of Energy

Monday15-2025
December

Time
10 -12 AM

Saudi electricity
company

الشركة السعودية للكهرباء
Saudi Electricity Company

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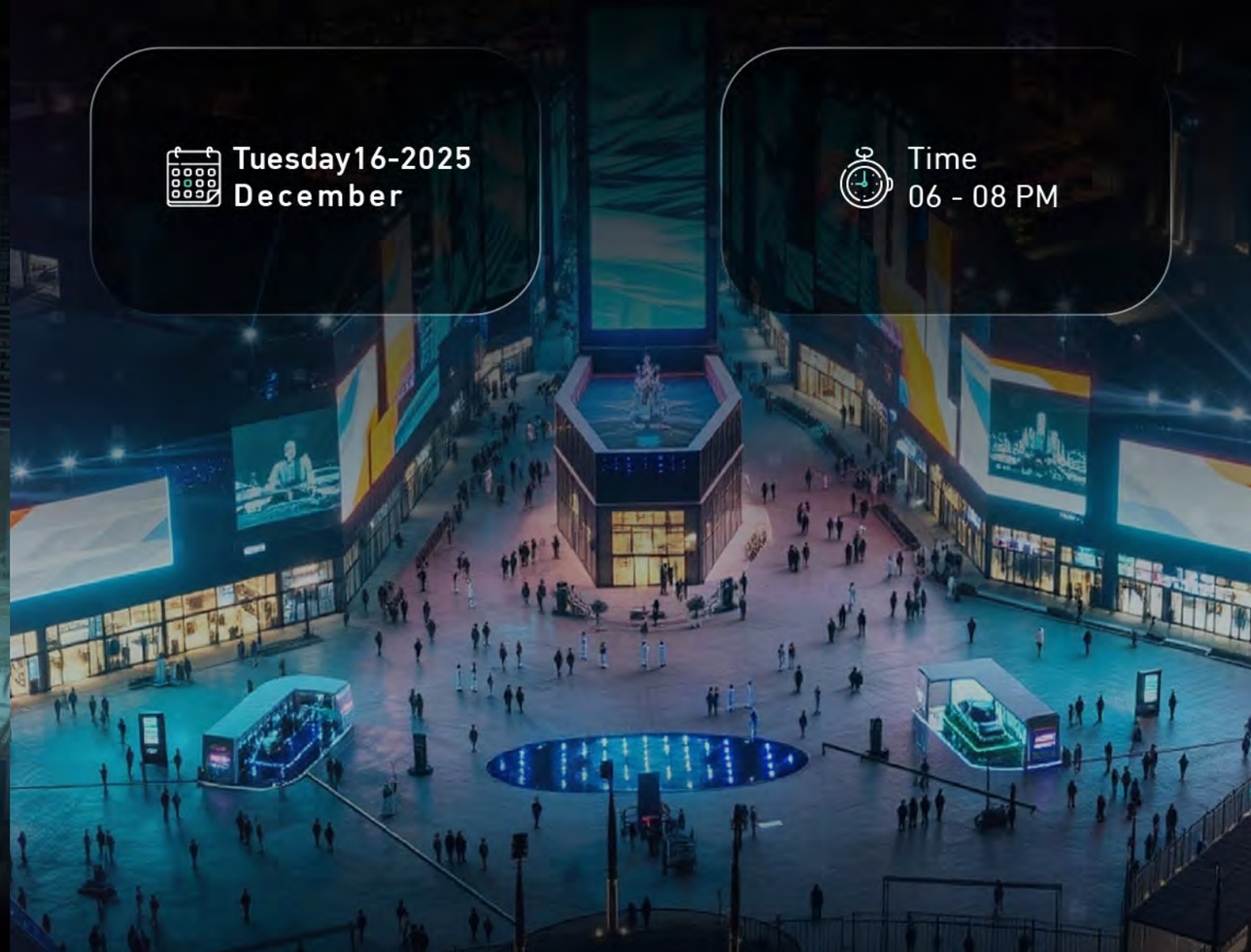
Boulevard World Social Trip

A Global Experience In The Heart Of Riyadh

Tuesday16-2025
December

Time
06 - 08 PM



Tuesday, 16 December

Day Two

Sovereign AI for Critical Infrastructure:
Securing the Nerves of Energy and Utilities

Keynote Speaker

09:00 - 09:15 am

Rohit Pareek
Co-founder and Chief Product Officer
Impresa.ai

impresa.ai
Smart.Simple.Innovative

Sustainable Future is a Digital Future

Keynote Speaker

09:20 - 09:40 am

Martin Zurcher
Global Head Digital Sales
HITACHI Energy

HITACHI

AI Applications & Cyber Attacks

Technical Session

09:15 - 10:30 am

Ihab Mokhles — CUCULUS

Towards Transparent and Efficient Fraud Detection in Smart Metering Using Explainable AI

Umakant Kolwar — impresa.ai

:AI-Powered Smart Meter Insights Unlocking Grid Intelligence for Vision 2030

Mohammad Altaisan — aramco

Machine Learning-Based Fault Detection and Classification in Power Transmission Lines

CHAIRMAN

Murali Venkatraman
ENOWA NEOM - KAUST

BREAK

Attaining Dependable Power Supply in the Age of Renewables Opening

Keynote Speaker

11:00 - 11:15 am

Mazin Al Bahkali
CEO
Principal Buyer

المشتري الرئيس
PRINCIPAL BUYER

Executive Perspectives on Grid Modernization

Panel Discussion

11:15- 12:00 pm

Amer Al Ajmi
CEO
Alfanar Engineering Services

Wael Gad
CEO
UTEC

Ramprasad Satyam
Senior Vice President- Electrification & Automation Business
SIEMENS

Faris Aljehani
Founder and CEO
DEMA Energy

Yazeed Alzoom
Deputy CEO
Dar Massader

Jehad Abushama
. Founder & CEO of Solactron, Inc
AlOjaimi Group

Zhibo Yang
Director
BYD

Moderator

Khaled Alshehri
KAPSARC

BREAK

Shaping Utilities of the Future

Panel Discussion

11:15- 12:00 pm

Nasser Al-Qahtani
Assistant Minister for Electricity Affairs
Ministry of Energy

Khalid Alghamdi
President & Chife Executive Officer
Saudi Electricity Company

Amin Khodaei
VP of Education
IEEE PES

Abdullah Albishi
Governor
Saudi Electricity Regulatory Authority

Raad Alsaadi
Vice Chairman & Managing Director
ACWA Power

Moderator

Ahmed Al-Essa
SPARK

BREAK

Stories of Success in Energy Industry

Panel Discussion

02:00- 03:00 pm

Sabah Al Mutlaq
Vice Chairman
Alfanar Group

Salem Alojaimi
CEO
Alojaimi Holding

Hany Assal
Founder & Chairman
Globaltronics Industrial Group

Moderator

Hamoud Al-Fayez
TV Presenter

LUNCH BREAK

Wednesday , 17 December

Day Three

Renewable & Storage Energy

Technical Session

09:00- 10:30 am

Abdallah Dhaydel

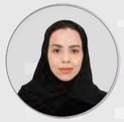
Study and Evaluation of Solar PV-Diesel-Battery Hybrid System for the Isolated Jannah Island in Saudi Arabia

Akib Refat KFUPM

Voltage Stability Impacts of High Penetration Electric Vehicles on Transmission Grids

Gergo Varhegyi EPRI

Integrated Market–Grid Simulation Framework for Optimizing Short- & Long-Duration Energy Storage Technologies in 100% Renewable Power Systems



Haneen Alsaeed المشتري الرئيس PRINCIPAL BUYER

Renewable Energy Integration Frameworks: Comparative Strategies for Saudi Arabia

Hassan Farhangi عناية الطاقة energycare

Saudi Arabia's Smart Microgrid Demonstration Platform

Abdelaziz Saidi

Forecasting of Wind and Solar Photovoltaic Power Generation Using Advanced Machine Learning: A Case Study of Saudi Arabia

CHAIRMAN

Waleed AlAmeer
Saudi Electricity Company

BREAK

Grid Security, Resilience & Reliability

Technical Session

11:00- 12:00 pm

William Figueira aramco

Assessment of Traveling-Wave Fault Location in Non-Homogeneous Feeders Terminated in Multiple Cable-Fed Transformers

Nedhal Al-Amri المشتري الرئيس PRINCIPAL BUYER

Rethinking Grid Storage: CO2-Based Energy Storage as a Competitive Alternative to Conventional Technologies

Rodrigue Saab CUTSFORTH

From Reliability to Intelligence: Building a Roadmap to Smart Asset Management for Transmission and Distribution

CHAIRMAN

Saleh Bamasak
National Grid

BREAK

The Next Wave of Power & Digitalization

Panel Discussion

12:30- 01:30 pm

Mario López
CEO of Albitel
Dar Massader Company in Europe

Abdullah Assal
VP
Globaltronics

Boker Agili
Technical Senoir Advisor
SESP

Khaled Al Medbel
Head of Business Development -KSA
ACWA Power

Emad Al-Juwaed
Principal Buyer

Holger Hartel
Power Consultant
HITACHI

Moderator

Fahad Alsokhiry
King AbdulAziz University

BREAK

Technologies in Smart Grid

Technical Session

02:00- 03:00 pm

Murad Anwer
Use of Advanced Metering Infrastructure for Live Downed Conductor Detection

Ali Al-Rumiah
Transformer Load Monitoring and Forecast

Mohamed Hendam
Exploring Demand Management Flexibility as a Catalyst for the GCC Energy Transition: a Framework to .Assess Time-varying Tariffs

Basil Almabrok
Regulatory Aspects in Smart Grid

CHAIRMAN

Tarfa Shubayli
Ministry of Energy

BREAK

Closing Session

POSTER SESSIONS

Riyadh, Ritz Carlton Hotel 16 Nov. 2025

10:00- 11:00 am Session One

ID#	Poster Title	Name	Organization
1	Intelligent solar integrated three phase grid forming inverter using droop control	Md. Samiul Alam	KFUPM
2	Negative-Sequence based Directional Overcurrent Adaptive Protection Scheme for Distributed Generation	Venkata Neelamraju	Saudi Electricity Company
3	Inferring Low-Voltage Distribution Topology from Trench Footprints: A Deep Learning Framework	Mohammed Alsalmi	Prince Sattam bin Abdulaziz University
4	Synchrophasor Data-Driven Secure Blockchain Architecture for High Impedance Fault Detection	Hany Abdelsslam	Kafrelsheikh University
5	Accelerating Towards Sustainable Mobility: Key Factors in Electric Vehicle Adoption	Muhammad Abrar	Lancaster University
6	Incremental Quantity Based Protection for Transmission Line connecting Inverter Based Resources	Praveen Nagaraj	Hitachi Energy L L C
7	Innovative Microgrid Planning for Grid Restoration and Support Using Distributed BESS Systems	Mohammad Alnaeem	ENOWA NEOM
8	Intelligent Control of UPQC Using ANN for Power Quality Enhancement in FUZZY Logic-Controlled Renewable Integrated Systems	Ashish Oliya	K&A Engineering Consulting, PC
9	Advanced Event-Triggered Virtual Inertia Control for Robust Frequency Regulation in Hybrid Power Systems under False Data Injection Attacks	Nawaf Alnahidh	KFUPM
10	Impact of DER and Metro demand on Distribution Networks	Abdullah Almehizia	Saudi Electricity Company
11	Optimizing Saudi Arabia's Power Grid: The Role of AC/DC Hybrid OHTL Systems and BESS Integration for Energy Efficiency	Razan Aloteebi	KFUPM
12	Refining TUoS Pricing in Saudi Arabia: A Technical Exploration in Support of Grid Efficiency and National Energy Goals	Majed Almajed	National Grid SA
13	Real Time Digital Simulator (RTDS) Hardware in the loop (HIL) Testing of Battery Energy Storage System (BESS) Controller	Muhammed Worku	GCC Electrical Testing Laboratory
14	Robust Sliding Mode Control of On-Board Electric Vehicle Charger	Irfan Sami	KFUPM
15	Impact of Energy Storage Systems into the Electrical Grid Decarbonization	Azam Almajed	Saudi Aramco
16	Robust High-Gain Control for Maximum Power Point Tracking of Variable-Speed Wind Turbines	Syed Amrr	KFUPM
17	PV Fault Detection using Artificial Intelligence based image processing	Wonsuk Ko	King Saud University
18	Case Study: Techno-economic Assessment of Distributed vs Centralized Solar PV Power Supply for Street Light Applications	Khalid Alshabib	Saudi Aramco

11:30- 12:30 pm Session Two

ID#	Poster Title	Name	Organization
19	Parameter Identification and State of Charge Estimation of Li-Ion Batteries for Electric Vehicle Applications.	Badis Lekouaghet	Research Center in Industrial Technologies (CRTI)
20	Smart Grid-Integrated Solar PV Recycling: Potential for CO2 Reduction and Material Recovery in Saudi Arabia	Khalid Alhamdan	King Abdullah City for Atomic and Renewable Energy
21	Intelligent AI-based Reinforcement Learning Energy Management System	Rahaf Aljohani	King Abdulaziz University (KAU)
22	OPTIMIZING WIND FARM DEVELOPMENT WITH GEOSPATIAL ANALYSIS IN EASTERN SAUDI ARABIA	Mohamed Elkadeem	KFUPM
23	Assessment of Short-Circuit Strength Degradation Under Solar PV Integration: A Case Study on the Saudi Power Grid	Waleed Albukhari	TVTC - Al-Kharj Technical College
24	A Resilient Multi-Resonant Controller for Standalone and Grid-Connected PV System	Kamran Zeb	Interdisciplinary Research Center KFUPM
25	Attention-Augmented Deep Learning Framework for Unified Estimation of Battery Charge, Health, and Lifetime in Li-ion Batteries	Muhammad Abdullah	KFUPM
26	Transformer Load Monitoring and Forecast	Sara Alabbadi	Saudi Aramco
27	National Renewable Flexibility Backbone: A Phased Techno-Economic Roadmap of Multi-Site Pumped Hydro Storage in Tuwaiq Mountain & HVDC to Achieve Net-Zero Power Target in the Central Operating Region	Alwaleed Alquraini	NEOM
28	AI-Driven Adaptive Protection Framework with Relay Coordination and Device Recommendation to Improve Selectivity in Industrial Smart Grid Power Distribution Networks	Doaa Alghamdi	King Abdulaziz University
29	Hybrid Architecture in Telemetering-Hybrid Approach – Deploying a GI"	João Schutze	Wasion
30	Metaheuristic Algorithms for Optimal Design of VSC-HVDC Fault Current Limiters	Muhammad Ahmad	KFUPM
31	Integrated Feedback Loop for Ancillary Services Optimization of Economic Dispatch and Automatic Generation Control	Hassan Alsobaie	Student
32	From Terminal to Control Centre - Automated SAS Testing	Onur Durak	OMICRON electronics GmbH
33	Deep Reinforcement,ÄëLearning Framework for Cyber,ÄëResilient Smart Grids: Adaptive Demand,ÄëResponse and False,ÄëData Injection Mitigation	Mohammad Alauthman	Department of Information Security, University of Petra
34	PV Fault Detection using Artificial Intelligence based image processing	Khidir Mohamed	KFUPM
35	Optimal Design PV System for a Hospital in al Kharj using SAM	Albandari Alqahtani	PSAU
36	Impact of Innovative Combination of Additive Materials in Active Material on (Enhanced Flooded Batteries (EFB	Amal Alshehri	Princess Nourah Bint Abdulrahman University

POSTER SESSIONS

Riyadh, Ritz Carlton Hotel 17 Nov. 2025

01:00- 02:00 pm Session Three

ID#	Poster Title	Name	Organization
37	Vulnerability-based Optimal Selection of Quantum-secured Links and Energy-Efficient Smart Grids	Norah Elkherayef	Princess Nourah bint Abdulrahman University
38	Improving Power Quality Of Electric Network By Compensation Of Voltage Surges	Somaia Afify	King Abdulaziz University
39	Combined Battery-Supercapacitor Storage Banks with Photovoltaic System-Fed for Drone Charging Station	Mahmoud Elmorshedy	Prince Sultan University
40	Enhanced Efficiency and Stability of Perovskite Solar Cells Through Coating Neodymium-Doped Upconversion Nanoparticles with TiOf	Bayan Alshehri	Imam Abdulrahman bin Faisal University
41	Enhancing Renewable Utilization Using Sand-Based Thermal Energy Storage Systems	Atheer Alabdulmohsen	King Faisal University
42	Solar Powered Intelligent Robotic Sorting System Using AI Vision For Construction Waste	Nourah Alsharhan	Princess Noura University
43	Hybrid Solar and Wind Energy System	Mohammed Raslan	Al Asala Colleges
44	INNOVATIVE APPROACHES FOR ENHANCING POOL BOILING HEAT TRANSFER: A REVIEW OF SURFACE AND FLUID ENGINEERING TECHNIQUES	sajana abdulsamad	KFUPM
45	MPPT and CPG Algorithm of Photovoltaic Systems Using Interleaved Boost Converter	Saad Alyahya	Prince Sattam bin abdulaziz university
46	Performance of spiral wound membrane under V-AGMD configuration powered by evacuated tube solar collector	Ahmed Omera	KFUPM
47	Resilience-Oriented Artificial Intelligence based Hybrid Control Architecture for Frequency–Voltage Stability in EV-Integrated Multi-Area Smart Grid Systems	Muhammad Majid	KFUPM
48	Optimization of Economic Dispatch with Controllable Load Resources in Renewable-Dominated Power System	Sami Alalwani	North Carolina State University
49	AI-Powered Digital Twin for Solar Energy Optimization	Aseel Alamri	King Abdulaziz university
50	Enerlytics: A SCADA-Assisted AI Platform for Predictive Maintenance & Energy Efficiency	Latifah Alrasheed	Princess Noura University
51	Flying Vehicle for Smart PV Cleaning and Inspection to Enhance Renewable Energy Efficiency	Suhaila Al Khalaf	King Faisal University
52	Decarbonizing Saudi Steel Industry via Green Hydrogen Integration: A Quadruple Hierarchical Optimization	Kotb Mohamed	KFUPM
53	Advanced power syestems and modern technologies in poewr engineering	Waleed Alsllum	Najran University
54	HOME ENERGY MANAGEMENT SYSTEM USING AI	Huss alatwah	Najran University

10:00- 11:00 am Session Four

ID #	Poster Title	Name	Organization
55	Protection Against Cyber-Attacks of Transmission Lines with Shunt-Reactors	Latifah Alessa	KFUPM
56	AI-Driven Robot for Pipeline Inspection: Enhancing Energy System Resilience and Sustainability in Smart Grids	Mohammed Almasabi	Najran University
57	Localized Manufacturing and Intelligent Deployment of Micro-PMUs to Accelerate Saudi Arabia's Smart Grid Transformation	Osamah alotaibi	Taif University TU
58	Types of Gravity Batteries	Faris Alazman	Jubail Industrial College
59	Engineering TiO_2-Coated Upconversion Nanoparticles for Efficient and Stable Perovskite Solar Cells	Hadeel Alrashood	Imam Abdulrahman bin Faisal university King Abdulaziz City for Science and Technology
60	HYBRID ENERGY STORAGE SYSTEM FOR DC MICROGRID	Mohammed Alsubaie	IMSIU
61	Design and Implementation of a Remote Virtual Monitoring System for Solar PV Plant	Mohammed Shawqi	King Faisal University
62	Robust Fast Distributed Secondary Control for Optimal Dispatch and Voltage Regulation in Islanded DC Microgrid	Mohamed Zaery	KFUPM
63	Advanced Event-Triggered Virtual Inertia Control for Robust Frequency Regulation in Hybrid Power Systems under False Data	Muhammad Majid	KFUPM
64	Adaptive Multi-Input Isolated Πuk Converter for Smart EV Charging Systems	Sara Alobayah	Prince Sattam University
65	Attention-Augmented Deep Learning Framework for Unified Estimation of Battery Charge, Health, and Lifetime in Li-ion Batteries	Abdullah Memon	KFUPM
66	Enhancing Cyber Security of Load Frequency Control Systems: A LMFNN based Approach for Detecting False Data Injection Attacks in Two Area Renewable Energy based Centralized Power System	Muhammad Majid	KFUPM
67	Forensics by Design and Zero-Trust Security for Cyber Attacks on EV Charging Stations in Smart Grid	Abdulmalik Saleh	University of prince Mugrin
68	Development of an AI-Based Adaptive Control System for Reducing Energy Consumption in Controlled Environments through Demand-Driven Artificial Lighting Management	Jenan Aldossri	Mawhiba King Abdulaziz university
69	AI-DRIVEN INTRUSION DETECTION FOR SMART GRID	Ali Sayghe	Yanbu Industrial College- Royal Commission for Jubail and Yanbu
70	SMART SOLAR PANEL CLEANING AND PERFORMANCE MONITORING SYSTEM USING IOT	Yazn Alsalmi	Taif university
71	Grid-Connected Operation of an Eleven-Level Inverter for Solar PV Applications	Mohammad Tayyab	KFUPM
72	:Green Hydrogen Production A Clean and Low-Carbon Energy Technology	Mohammed Alghamdi	KACST

11:30- 12:30 pm

Session Five

ID#	Poster Title	Name	Organization
73	Economic and Environmental Assessment of the Integration of PV Systems into Saudi Government Buildings	Nawaf Alnahidh	Majmaah University
74	AI-Powered Hybrid Control Architecture for Frequency and Voltage Stabilization in .Cyber-Vulnerable Multi-Area Power Systems with EV Penetration	Muhammad Inshal	KFUPM
75	Modern Cyber Security Techniques for Detecting DDoS Attacks in Smart Grid Infrastructure	Muhammad Abdullah	FEST Department of Computer Science Iqra University Karachi Pakistan
76	Techno-Economic and Environmental Analysis of Distributed Energy Resources in a University Facility	Mohammed Al-haj	Qassim University
77	Experimental Validation of Lithium-Ion Battery Charging Performance and Electrochemical Behavior at Extreme Temperatures	Hayder Ali	KFUPM
78	Smart Solar EV Charging Station with Remote Monitoring and Diagnostics	Sheeraz Iqbal	KFUPM
79	HYDROSUN DRONE	Haneen Alrashidi	Taibah University
80	Harnessing the Arabian Sun: Solar Power Towers for a Sustainable Future	Nabil Alhdfi	Imam Mohammed Ibn Saud Islamic University
81	Optimum Design of Hybrid Renewable Energy System to Electrify of Al-Ula City	Khalid Alanazi	Imamu Mohammed bin Saud Islmic University
82	Stochastic-Resilient LFC in Smartgrid Using Birds-of-Prey-Optimized FOPID Approach	Ghali Ahmad	KFUPM
83	Integrated Modelling, Control and Multi-Objective Optimization of Solar Battery Microgrid: Hybrid Technical and Economic Assessment	Ghadi Aldosari	Prince Sattam bin abdulaziz university
84	A Smart Dynamic Wireless Charging Lane for Electric Vehicles Using Solar and Hydrogen Energy	Malath Almulla	College of Engineering, King Faisal University
85	Analysis of Cyber-Attacks on The Smart Grid	Mohamed Hassan	Egyptian Electricity Transmission
86	Incorporating Solar Resource Assessment into Renewable Energy Policy and Planning	Imran Mushtaq	Dar Massader

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aramco
powered by how

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Aramco is an energy and chemicals company with oil and gas production as its primary business.

الهيئة السعودية لتنظيم الكهرباء
Saudi Electricity Regulatory Authority
SERA

The Saudi Electricity Regulatory Authority (SERA)

The Saudi Electricity Regulatory Authority (SERA) was established in 2001 to regulate Saudi Arabia's electricity sector. Originally named the **Electricity Services Regulation Authority**, it has evolved through several phases, including: the Electricity and Cogeneration Regulatory Authority, then the Water and Electricity Regulatory Authority (WERA), before a 2024 Council of Ministers Resolution approved the current name. Today, SERA regulates the electricity sector, oversees licensed entities' technical and financial performance, promotes fair competition, monitors service quality, and protects consumers while ensuring the sector's long-term sustainability.

الهيئة السعودية لتنظيم الكهرباء
Saudi Electricity Regulatory Authority
SERA

نبذة عنا

تتولى "سيرا" مسؤولية تنظيم قطاع الكهرباء واستدامته، ومراقبة جودة الخدمات المقدمة، وحماية المستهلكين، وترخيص العمل في القطاع ومراقبة الجهات المرخص لها وضمان استمرار المنافسة العادلة.

رؤيتنا

كهرباء موثوقة لمستقبل مستدام

رسالتنا

تنظيم نشاط الكهرباء بعدالة وحماية المستهلكين باستباقية

قيمنا

- حماية المستهلك
- موثوق
- المرونة
- التعاون
- النزاهة
- الشفافية

sera.gov.sa

الهيئة السعودية لتنظيم الكهرباء
Saudi Electricity Regulatory Authority
SERA

نموذج حماية المستهلك

من الهيئة السعودية لتنظيم الكهرباء

بدأت "سيرا" بسماع صوت المستهلك وتحليل تجربته مع الخدمة الكهربائية.

بهدف حماية المستهلك، ورفع مستوى رضاه، وتحديد مواضع التحسين.

حصرت "سيرا" التحديات، وكان لا بد من حل شمولي يغطي تجربة المستهلك مع الخدمة الكهربائية:

الانقطاعات | الشكاوى | الفوترة | الطلبات | إيصال الخدمة

انطلقت "سيرا" في تصميم نموذج حماية المستهلك باستباقية، إذ يعتمد على مراقبة جميع العمليات ذات العلاقة بالمستهلك لدى مقدم الخدمة، والتدخل الاستباقي بالنيابة عن المستهلك لحمايته، والتواصل الفعّال لمعرفة المستهلك بحقوقه وتحديثات طلباته وحالة الخدمة.

ركائز النموذج: المراقبة ◀ الحماية ◀ الشفافية

ماذا تغيّر على المستهلك؟

سابقاً
- المستهلك يقدم الشكوى
- المستهلك يطالب بالتعويض
- المستهلك يواجه صعوبة في متابعة الطلبات والتحديثات

بالنموذج
- الهيئة تتدخل استباقيًا نيابة عن المستهلك
- أتمتة إجراءات التعويض
- إشعار المستهلك لحظياً بتحديثات طلباته وحالة الخدمة

المستهلك.. مركز اهتمامنا ومحور قرارنا

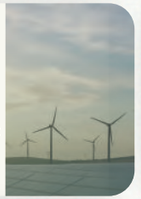
sera.gov.sa

Principal Buyer

At the Saudi Power Procurement Company, the executive arm of the Ministry of Energy chaired by HRH Prince Abdulaziz bin Salman, we ensure reliable power supply across the Kingdom and lead energy procurement. We work with global partners in renewable and thermal projects. Our participation in the Smart Grids Conference strengthens knowledge exchange and supports the development of advanced, efficient power networks

Key Activities

Generation capacity plan through a mid-term plan (7-years) that is in alignment with MoE energy mix

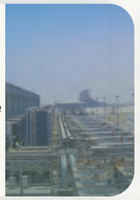


Tendering of electricity generation, co-generation projects, and projects implementation follow up

Entering into & managing power purchase, energy conversion, and on-sale agreements with generating Companies (SEC, IPPs, IWPPs)

Electricity sales in bulk to retail licensees or large consumers

Procuring primary fuel and back-up fuel for delivery to the generation licensees (when ECAs)



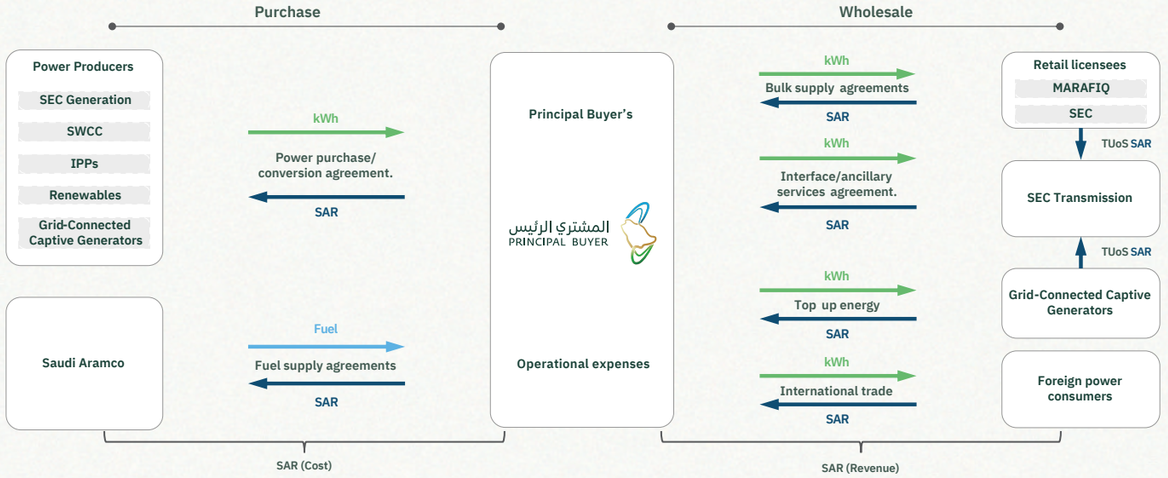
Renting, operating and maintaining assets and facilities, including gas, fuel, and treated water pipelines

Procuring system services from contracted generation/ co-generation licensees and sell

Exporting electricity (in coordination with NGSA, etc.)

MoE = Ministry of Energy - SEC = Saudi Electricity Company - IPP = Independent Power Producer - IWPP = Independent Water & Power Producer - ECA = Energy Conversion Agreement - NGSA = National Grid SATUoS = Transmission Use of System

Business Model



الشركة السعودية للكهرباء

Saudi Electricity Company

Saudi Electricity Company

Saudi Electricity Company (SEC) is the primary provider of electricity in the Kingdom of Saudi Arabia, responsible for the generation, transmission, and distribution of electricity through an extensive and integrated network spanning all regions of the Kingdom.

الشركة السعودية للكهرباء
Saudi Electricity Company

Saudi Electricity Company (SEC)

The primary source of electric power in the Kingdom, SEC generates, transmits, and distributes electricity through an extensive network that spans all regions of Saudi Arabia.

Vision To be a leading energy provider delivering exceptional customer experiences through innovative and sustainable solutions.

Mission To provide the best customer experience in our category and add value for our shareholders, while investing in our people, protecting the environment, and supporting digital transformation within and beyond the power sector.

Company Sectors

Power Generation
More than 480 units across 38 plants, with capacity exceeding 54 GW to ensure a stable supply.

Power Transmission
A network of over 92,500 kilometers, delivering reliable service with high standards of quality and safety.

Power Distribution
Reliable electricity delivery, with enhanced service channels and simplified connection and billing.

Strategic Priorities

- Supply security and reliability
- Local content development
- Financial sustainability
- Environmental stewardship and social responsibility
- Operational excellence and safety
- Leadership in customer experience and brand equity

الشركة السعودية للكهرباء
Saudi Electricity Company

الشركة السعودية للكهرباء

المصدر الرئيس للكهرباء في المملكة عبر شبكات الإنتاج والنقل والتوزيع الممتدة في جميع أنحاء البلاد.

الرؤية أن نصبح شركة رائدة في تزويد الطاقة وتقديم تجارب استثنائية للعملاء من خلال حلول مُبتكرة.

الرسالة نقديم أفضل تجربة للعملاء في فئتنا وإضافة قيمة مضافة للمساهمين لدينا أثناء الاستثمار في المواطنين وحماية البيئة وتأييد الرقمنة في السلطة.

قطاعات الشركة

توليد الكهرباء
إنتاج الكهرباء عبر أكثر من 480 وحدة في 38 محطة بقدرة تتجاوز 54 جيجاوات لضمان استقرار الإمداد.

نقل الكهرباء
نقل الطاقة عبر شبكة تزيد على 92,500 كيلومتر بخدمات وحلول موثوقة بمعايير عالية للجودة والسلامة.

توزيع الكهرباء
توصيل الخدمة الكهربائية للعملاء بموثوقية، مع تطوير قنوات الخدمة وتسهيل إجراءات التوصيل والفوترة.

استراتيجيتنا

- أمن وموثوقية الإمدادات
- توطين المحتوى المحلي
- الاستدامة المالية
- البيئة والمسؤولية المجتمعية والحوكمة
- السلامة والتميّز التشغيلي
- الريادة في تجربة العميل والعلامة التجارية

ACWA POWER
اكوا باور

ACWA Power

We are a developer, investor and operator of power generation and desalinated water plants with 110 assets in operation, construction or advanced development across 15 countries. We employ more than +4,000 people, with 58.7% local employment. AWA Power's portfolio, with an investment value of USD 114.6 billion, can generate 93 GW of power and produce 9.3 million m3 /day of desalinated water.

العجيمي
ALOJAIMI
Holding القابضة

Alojaimi

Our History of Investment

From Saudi Arabia to the heart of the world, Alojaimi Holding presents a name synonymous with advancement in various fields and a distinguished position among the most prestigious investment groups. Our leadership emerged from the vision of Sheikh Mohammed Alojaimi and his firm belief in the role of every individual in developing their community. Achievements continued to transform his vision into reality across different sectors.

The story of Alojaimi Holding began in 1976 with the launch of Mohammed Alojaimi Contracting Establishment in Dammam, whose activities expanded to cover the main cities of the Kingdom represented in Riyadh, Makkah, Jeddah, Madinah, Hail, Tabuk, and Sakaka, with a workforce exceeding 7,000 experts from various engineering and technical fields.

Alojaimi Holding continued its mission in employing resources with high investment wisdom, through establishing several factories for electrical infrastructure products, power transmission and distribution services, industrial paper production, and completed its vision by achieving excellence in the investment and real estate sector, and many other fields and activities such as recycling, cybersecurity, engineering and industrial services.

Alojaimi Holding is proud of its long-standing partnerships with many governmental agencies, authorities and major national companies. It also has a track record full of achievements in various business sectors, and is strictly committed to continuing well-studied investments in various fields that support the national economy.

العجيمي
AL OJAIMI
Holding القابضة

العجيمي القابضة:

رِيادة استثمارية وبصمة سعودية

تعد العجيمي القابضة إحدى أبرز المجموعات الاستثمارية الرائدة في المملكة العربية السعودية، حيث تمتد مسيرتها لأكثر من 4 عقود من النمو والتوسع عبر العديد من القطاعات الحيوية. انطلقت المجموعة عام 1976 بتأسيس العجيمي للمقاولات في مدينة الدمام، ثم توسعت أنشطتها لتشمل مدناً رئيسية في السعودية بقوى عاملة تجاوزت 7000 خبير. وعززت المجموعة مكانتها الصناعية بإنشاء مصانع لمنتجات البنية التحتية الكهربائية وخدمات نقل وتوزيع الطاقة وصناعة الورق، بالإضافة لتميزها في المجال الاستثماري والعقاري وخدمات إعادة التدوير والأمن السيبراني. تمتلك المجموعة شراكات عريقة مع جهات حكومية وشركات وطنية، وتواصل نهجها في الاستثمار الحكيم لدعم الاقتصاد الوطني، مسترشدة برؤية مؤسسها الشيخ محمد بن سالم العجيمي ودوره في تنمية المجتمع.

قطاعات العجيمي القابضة:

1. قطاع المقاولات:

يشمل أعمال البنية التحتية ومشاريع الطاقة، ويتمتع بخبرة طويلة وتصنيف عالٍ لدى العملاء الحكوميين والشركات الكبرى. كما يوفر خدمات الاستشارات الهندسية لتعزيز كفاءة المشاريع.

2. قطاع الصناعات الكهربائية:

يوفر حلولاً كهربائية مبتكرة لقطاع الطاقة، ويضم مصانع للمحولات والقواطع واللوحات الكهربائية وكابلات الجهد المتوسط، ويصدّر منتجاته للأسواق المحلية والإقليمية والعالمية.

3. قطاع الصناعات الإنشائية:

يشمل مصانع الورق الصناعي والخدمات البيئية كإعادة تدوير المخلفات الورقية ومعالجة المياه والصرف الصحي بأحدث التقنيات، بما يعزز مبدأ الاستدامة.

4. قطاع الاستثمار:

يتنوع بين الفرص في الاسواق المالية والعقارية والخدمية، ويشمل منصات لوجستية وأذرع استثمارية متخصصة.

5. قطاع الخدمات:

يوفر حلولاً تقنية في مجال الأمن السيبراني والشبكات المتطورة، بالإضافة لخدمات هندسية متنوعة لمشاريع نقل وتوزيع الكهرباء والتدريب التقني.

بفضل الله ثم برؤية واضحة واستراتيجية حكيمة، واصلت العجيمي القابضة نجاحها على مدى 4 عقود، لتكون جزءاً أصيلاً من نسيج الاقتصاد الوطني السعودي، ورمزاً للريادة الاستثمارية والتميز الصناعي بكفاءات محلية.

SMC

شركة العدادات السعودية

SAUDI METERS COMPANY

Saudi Meters Company

Founded in 1981 as the first smart water application manufacturer in the gulf region, producing mechanical smart water application types (Dry Multi-jet, Semi Dry Multi-jet, Wet Multi-jet)., and serving KSA and GCC markets. The company has recently expanded its product portfolio and production facility even further offering its extensive experience in the field of smart solutions manufacturing. In 2017, signed an industrial agreement with Diehl Metering to manufacture smart water applications, with a production capacity of 500,000 smart water solutions per year.

In 2019, signed an industrial agreement with Kaifa Metering Technology to manufacture smart electricity applications, with a production capacity of 1.5 million smart electric applications per year.

ABOUT US

Since our establishment in 1981, Saudi Meters Company (SMC) has been dedicated to the development and manufacturing of high-quality water and electricity meters that meet global standards.

As a part of Abunayyan Holding Group and take pride in being the first meter manufacturer in the Gulf region.

For more than four decades, we have been a fundamental part of transformation projects in the water and energy sectors inside and outside the Kingdom.

With over two million smart meters installed, reflecting the trust and confidence our partners place in our solutions.

CONTACT US

info@saudimeters.com
+966 11 498 5384
www.saudimeters.com

Member of

ابونيان القابضة
ABUNAYYAN HOLDING

OUR MISSION

- Manufacture and supply world class water, power and gas measuring solutions through a diverse product range of superior quality thereby ensuring customer satisfaction.
- Engage employees and make sure they are part of a thriving and stimulating work environment
- Create a relationship of co-prosperity with shareholders' guaranteeing their returns are secure.

OUR VISION

To be the leader in manufacturing of Industrial and Residential Measuring Instruments catering to the power, water industries/sectors in KSA and MENA region

OUR PRODUCTS

Smart Water Meters

Smart Electric Meter

Smart Gas Meter

We believe in quality, reliability, and solutions that drive progress.

SMC AMI SOLUTION

The SMC's AMI Solution Showcases a robust end-to-end smart metering system.
It integrates electricity, water, and gas meters with advanced HES, MDMS, and WFM platforms for data collection, billing, and asset management.

The system supports flexible deployment across various infrastructures using container and Kubernetes technologies. Security compliance includes METAS, IEC62443, and ISO27001, ensuring reliable and secure operations for utility providers.

AFTER-SALES SERVICES

- Technical support
- Software updates
- After-Sales Services
- Training for operational teams
- Installation and commissioning
- Preventive maintenance

SMC شركة العدادات السعودية SAUDI METERS COMPANY

الفنار
alfanar

Alfanar

Alfanar is a global company headquartered in Riyadh, Saudi Arabia, specializing in the energy industry. The company focuses on the manufacturing and trading of low, medium, and high voltage electrical products. Additionally, alfanar offers engineering and construction solutions and services for traditional and renewable energy projects, oil and gas, water treatment, infrastructure, technical services, digital solutions, through alfanar Projects. alfanar conducts its manufacturing activities

alfanar SF6 Free SRMU

Designed by alfanar R&D centers at Medinet alfanar, in Saudi Arabia, our cutting-edge SF6 Free SRMU, developed with advanced technology for superior performance and sustainability.

Dry Air Filling Pressure
1.3 bar abs (inline with SF6 standard pressure)

Rated Voltage
24 kV

Rated Current
630 A

Rated Frequency
50/60 Hz

Short Time Current
21 kA

Internal Arc Classification
A-FLR 21kA/1s

Standard
IEC 62271-200, 100, 102, 103

Location
Indoor (IP41) and Outdoor (IP54)

الفنار alfanar | Scan to FOLLOW US

الفنار alfanar PROJECTS

SHAPING THE FUTURE OF **ENERGY TRANSFORMATION**

DELIVERING EXCELLENCE

HVDC Technology
Revolutionizing efficient energy transmission across vast distances.

Bisha BESS Project
The world's largest single-phase grid-connected BESS, ensuring unmatched grid stability and renewable integration.

Substation Expertise
Four decades of turnkey construction expertise ensuring seamless energy flow.

For The World. With The World.™

www.alfanarprojects.com

STATE GRID
CORPORATION OF CHINA

State Grid Corporation of China

State Grid Corporation of China is the largest utility enterprise with industry leadership and international influence .State Grid has recorded the world's longest hours of safe operation of its super large grid and integrated the largest amount of renewables with the strongest power transmission capacity, and the reliability of urban power grid supply reaches 99.976%.

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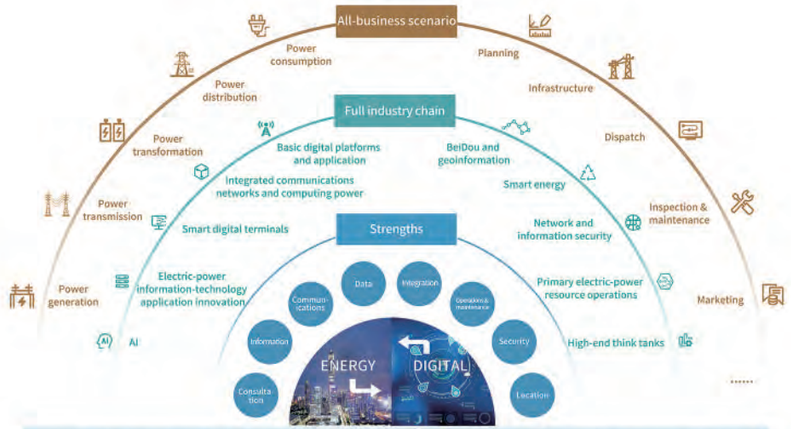
Establishment of a New Power System to Achievethe Energy Transition for the Goals of Carbon Peaking and Carbon Neutrality



6 branches	27 Provincial (Municipal) Power Companies	3 International Platform Subsidiaries	9 Financial Support Subsidiaries
4 Research Institution Subsidiaries	20 Industry Support Subsidiaries	2 Technology Training Subsidiaries	

STATE GRID
CHINA ELECTRIC POWER EQUIPMENT AND TECHNOLOGY CO., LTD.

Light the Beautiful World

China Electric Power Equipment and Technology Co., Ltd. is a wholly-owned subsidiary of State Grid Corporation of China. It works as an International Platform for State Grid covering investment-construction-operation with integrated solutions.

Saudi Arabia
Smart metering project
Smart Distribution Project
Advanced Distribution Management Systems Project

Saudi Arabia
500 MW Battery Energy Storage System Project

Saudi Arabia
±500 kV VSC HVDC Converter Stations for COA-SOA & COA-WOA Interconnection Link

Turkey
Van ±600kV MVA Back-To-Back Converter Station

Egypt
EETC 500 KV Transmission Lines Project

Pakistan
Matiari-Lahore ±660KV HVDC Transmission Project

Brazil
Belo Monte Ii ±800KV HVDC Transmission Project

Brazil
Serra Da Palmeira Windfarm Complex

Ethiopia
Off-Grid Solar Energy Project

Hitachi Energy

Hitachi Energy is a global technology leader in electrification, powering a sustainable energy future with innovative power grid technologies with digital at the core. Over three billion people depend on our technologies to power their daily lives. With over a century in pioneering mission-critical technologies like high-voltage, transformers, automation, and power electronics, we are addressing the most urgent energy challenge of our time – balancing soaring electricity demand, while decarbonizing the power system. With an unparalleled installed base in over 140 countries, we co-create and build long-term partnerships across the utility, industry, transportation, data centers, and infrastructure sectors. Headquartered in Switzerland, we employ over 50,000 people in 60 countries and generate revenues of around $16 billion USD.

ALGIHAZ HOLDING
الجهاز القابضة

Algihaz

Algihaz Holding is a major Saudi multi-billion-dollar group driving construction and development since 1975. Operating across construction, energy, industrial solutions, technology, and investment, it delivers key national projects and advances Vision 2030 through sustainable, technology-led initiatives that support community and economic growth in Saudi Arabia and beyond.

ALGIHAZ HOLDING
الجهاز القابضة
50 YEARS

About ALGIHAZ

ALGIHAZ HOLDING is a multi-billion-dollar, flagship Saudi Arabian company which invests in and delivers cross-sector construction and development programs throughout the Kingdom.
Since 1975, ALGIHAZ HOLDING has played a crucial role in some of Saudi Arabia's key projects across construction, energy, industrial solutions, technology and investment.
The company is committed to achieving the ambitions of Vision 2030 and investing in sustainable, technology-led and construction-based projects across multiple sectors which contribute to the development of communities in Saudi Arabia and internationally.

"A Saudi Arabian holding group, with local and global operations, investing in and delivering world-class construction, energy and development projects to create a sustainable future."

WWW.ALGIHAZ.COM

ALGIHAZ HOLDING
الجهاز القابضة

Energy

ALGIHAZ is a pioneering force in the energy transition, committed to driving the development of sustainable solutions across all sectors. As an innovative investor in sustainable energy projects, we leverage advanced technologies to build a brighter, greener future.
We are at the forefront of engineering, designing, and constructing renewable and hybrid energy solutions, drawing on our global expertise in energy infrastructure to deliver sustainable impact worldwide.

Construction

ALGIHAZ stands as a rising global star of innovation and excellence in the engineering, procurement, and construction (EPC) solutions for large-scale, complex & sophisticated infrastructure projects. With over five decades of proven success, we excel in bothtraditional and renewable energy infrastructure solutions.
Our profound local, regional and international markets expertise, combined with our extensive experience, empowers us to deliver unparalleled turnkey solutions for our clients in both the public and private sectors.
Ia worldwide digital hub.

Investment

ALGIHAZ is committed to improving lives through strategic partnerships with leading companies. By identifying and investing in long-term projects that deliver significant value and socio-economic benefits, both domestically and internationally,we are shaping a brighter future for all.

Industrial Solutions

ALGIHAZ is a catalyst for the knowledge economy, propelling the Fourth Industrial Revolution through technology-driven transformation.
We build platforms that empower the growth of the digital society, developing the technological solutions that contribute to non-oil GDP growth. By helping Saudi Arabia emerge as a global leader in e-government and investing in connectivity, we are making the Kingdom a worldwide digital hub.

دار مصادر
Dar Massader

Dar Massader

Dar Massader is positioned as a key enabler in the Kingdom's energy transformation - engineering and strengthening critical national infrastructure across the power generation, transmission and distribution sectors. From governmental projects to transformative initiatives, we engineer solutions that drive sustainability and prosperity. We have an extensive footprint, with projects across the compalete geographical region of KSA and various locations in USA, Europe, UK and the wider MENA region.

دار مصادر
Dar Massader

Enabling the Transition.
Sustaining the Future.

An Enabler of the **Energy & Power Transformation** in KSA & Beyond.

Dar Massader is a trusted partner and a key enabler to the Kingdom's energy transformation, providing innovative solutions, services and expertise across power generation, transmission, and distribution systems.

As one of the key enablers of Vision 2030, we are shaping the future of energy with global expertise & localized capabilities.

www.darmassder.com

Energizing Ambition. Empowering Change.

Shaping a resilient energy landscape powered by **innovation and expertise.**

From pioneering renewable energy projects to optimizing critical infrastructure, Dar Massader brings localized expertise and global partnerships to shape the region's power and energy frontier.

A Key Enabler for the Energy & Power Sector

Expanding the frontiers of renewable energy.

On-Shore & Off-Shore Energy Resource Assessment:

Dar Massader delivers precise solar and wind energy resource measurement services across the entire geographical region of the Kingdom, with localized expertise in design, engineering, & AI-driven data analytics to unlock renewable energy potential.

Pre-Development Feasibility Studies:

We conduct geotechnical, topographical, hydrological, and environmental impact assessments, facility design & master plan development, and bankable energy yield evaluations for various large-scale renewable energy generation projects.

Hybrid Solutions:

We design and implement hybrid microgrid systems and Battery Energy Storage Systems (BESS) to enhance grid efficiency, stability, and reliability.

Infrastructure Optimization:

Delivering high-voltage asset management, SMART Grid diagnostics, and electrical health indexing to secure the performance of critical infrastructure.

Innovating Generation, Transmission & Distribution:

As a technological enabler, Dar Massader drives Saudi Arabia's energy goals through projects that make an impact:

Geographical Surveys:

We have successfully completed the installation phase of the world's largest solar resource measurement campaign, encompassing an area of 850,000 km across the complete georapgical region of the Kingdom.

Unveiling Energy Potential:

We have successfully executed 331 solar and 93 wind measurement campaigns, identifying over ~50 GW of solar and ~24 GW of wind energy potential for the Kingdom. These ongoing projects continue to expand the nation's renewable energy capacity.

Solar & Wind Pre-Development Assessment:

Facilitated the development of 1.3 GW solar and 5 GW wind energy projects through complex design, precision engineering and analytics-driven consultancy.

Asset Management:

We provide comprehensive reliability assurance for HV electrical assets across the Kingdom through advanced testing methodologies and online condition monitoring systems. As a key enabler of the power sector, we have deployed +1,500 HV Asset Condition Monitoring Systems across the Kingdom, ensuring their optimized performance and preventing power failures.

Reliable. Efficient. Sustainable.

With a comprehensive portfolio spanning the entire energy value chain, from resource assessment and engineering to advanced testing, commissioning, and asset optimization, our solutions are engineered to address challenges across power generation, transmission, and distribution systems, ensuring reliability, efficiency, and scalability.

At Dar Massader, we combine localized solutions, knowledge transfer, and cutting-edge technologies to deliver sustainable solutions for government bodies, GIGA projects, and private enterprises alike.

Connect with us at **SASG 25**

Discover our innovative energy and power solutions at the Saudi Smart Grid Conference 2025. Connect with our industry-leading SMEs to discuss innovative partnerships, collaborations, and ideas shaping an energy-efficient tomorrow.

Visit us at Booth 21

Contact: info@darmassader.com

Partnering to redefine energy and power for a sustainable future.

SASG 25

دار مصادر
Dar Massader

MEMF

MEMF Electrical Industries is an innovative company in KSA's energy sector with over 40 years. MEMF develops integrated low, medium, and high-voltage smart products and solutions, from smart meters, breakers, transformers, low-voltage products, smart ring main units, medium voltage switchgear to energy management systems like SCADA, AMI. MEMF products are type-tested in labs as KEMA, ASTA, KERI, ISO, and OHSAS certified, leading the local and GCC markets, supporting Vision 2030.

Innovating for the kingdom future

Localizing technology and developing highly efficient & sustainable smart solutions in contributing to the kingdom's prosperity and vision 2030

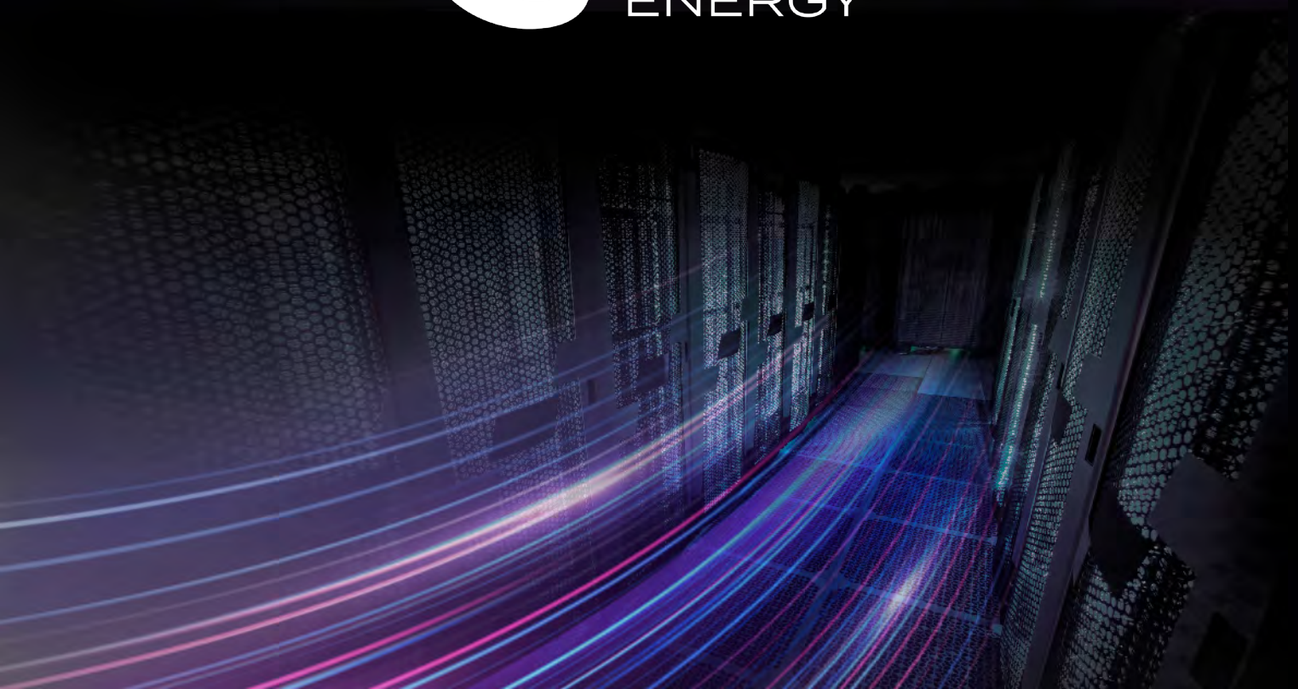
MEMF

الشبكات الذكية
Smart Grid

وزارة الطاقة
MINISTRY OF ENERGY

MEMF

DEMA ENERGY



DEMA Energy

DEMA Energy provides a suite of energy optimization services to energy providers in Saudi Arabia and the MENA region. DEMA's solutions are designed to tackle inefficiencies in energy systems to create value, improve efficiency, and reduce the carbon footprint

عناية الطاقة
energycare

Energy Care

Energy Care Company (ECC) is a subsidiary of Energy Care Holding Group. Established in 2012 in Jeddah, KSA, ECC provides energy efficiency solutions and products for hospitality, residential and industrial clients.

ECC's products and services include the design, supply, commissioning and field support for smart metering, energy efficiency and advanced metering infrastructure for utility, residential, commercial and industrial customers in the MENA (Middle East & North Africa) Region.

ECC's manufacturing facility is located in Jeddah, KSA, with sales and support offices in Jeddah and Riyadh. Energycare works closely with its stakeholders and partners to develop and manufacture Smart Meters, communication modems and AMI systems in the kingdom.

عناية الطاقة
energycare

2012 Establishment of the Company

2013 Establishment of the Research and Development Center to Support Innovation

2014 Conclusion of a Partnership for Localizing

2015 Establishment of a Smart Meter Factory

2016 Qualification and Accreditation of the Factory According to Standards

2017 Production of the First Batch of Meters

2018 The biggest supplier of Smart Meter in KSA

2019 Expansion of the Factory and Establishment of an Integrated Testing Center

2020 Supply of More Than 2 Million Meters

2021 Establishment of "Care Holding" Company to Expand Activities

2022 Laying the Foundation Stone for the New Factory

2023 Expansion in the Local Market

2024 JV partnership with LINYANG

2025 Opening of the New Factory

Lucy Electric

Lucy Electronics

Lucy Electric is a global leader in secondary power distribution solutions, with over 100 years of experience in the electrical industry. Headquartered in the UK, we operate across key international markets including the Middle East, Asia, Africa, Australia, and South America, with offices and manufacturing facilities in the UAE, Saudi Arabia, India, Thailand, South Africa and Brazil.

Lucy Electric: Transforming Power

We're transforming power for a smarter, greener tomorrow for everyone.

لوسي إليكتريك تحويل الطاقة

نحن نعمل على تحويل الطاقة من أجل غدٍ أكثر ذكاءً واخضراراً للجميع.

We're an international leader in smart grid solutions backed by intelligent secondary power distribution.

We develop cutting-edge technologies, using digitalisation and AI to power significant breakthroughs, including predictive maintenance and remote monitoring technologies.

Our innovations are helping to lead the way to a carbon-free world. Our long-term partnerships have resulted in developments that advance the built environment, support the move to electrification and prepare society for net zero.

We have a truly global reach. Our worldwide operations have already helped us enable safe, reliable and efficient energy distribution to homes and businesses across the UK, Middle East, India, Asia-Pacific, Africa and South America.

Lucyelectric.com
salesksa@lucyelectric.com

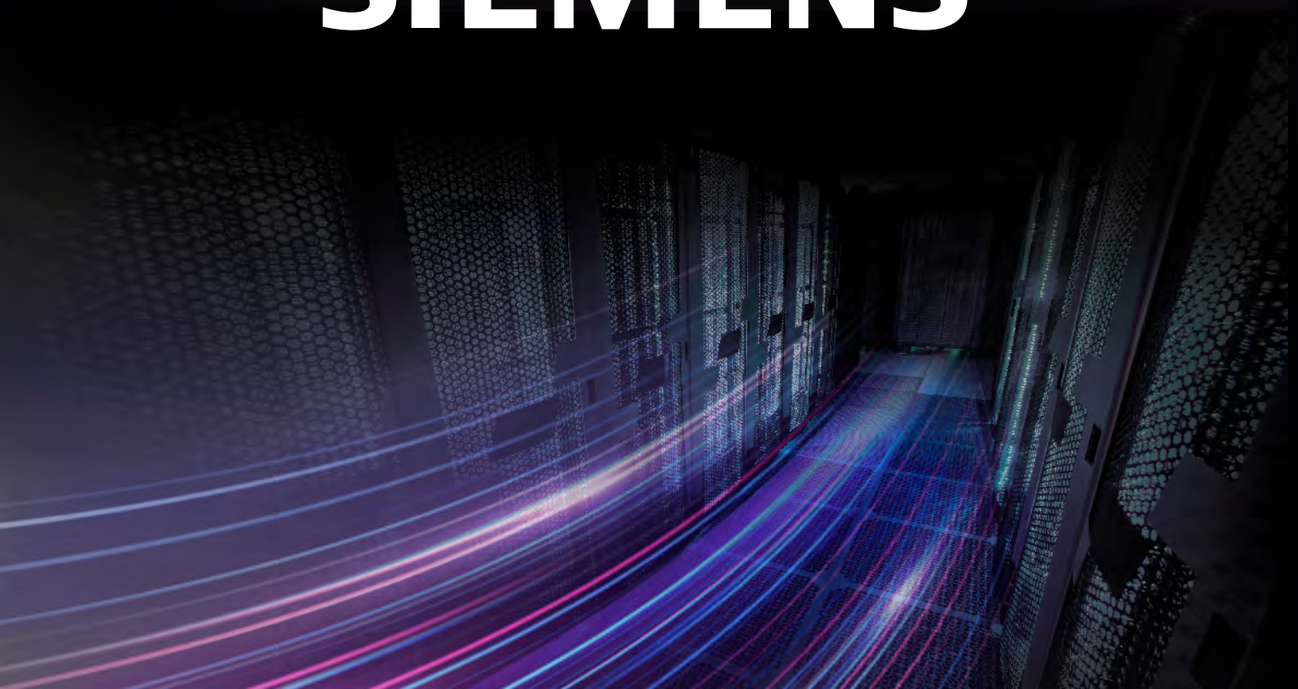
نحن شركة رائدة عالمياً في مجال حلول الشبكات الذكية المدعومة بالتوزيع الثانوي الذكي للطاقة.

نقوم بتطوير تقنيات متقدمة، باستخدام الرقمنة والذكاء الاصطناعي لتعزيز الإنجازات الهامة، بما في ذلك الصيانة التنبؤية وتقنيات المراقبة عن بعد.

تساعد ابتكاراتنا في قيادة الطريق إلى عالم خالٍ من الكربون. وقد أثمرت شراكاتنا طويلة الأجل عن تطورات تعزز البيئة المبنية وتدعم الانتقال إلى الكهربة وتهيئ المجتمع للوصول إلى عالم خالٍ من الكربون.

لدينا انتشار عالمي حقيقي. لقد ساعدتنا عملياتنا في جميع أنحاء العالم بالفعل على تمكين توزيع الطاقة الآمنة والموثوقة والفعالة على المنازل والشركات في جميع أنحاء المملكة المتحدة والشرق الأوسط والهند وآسيا والمحيط الهادئ وأفريقيا وأمريكا الجنوبية.

SIEMENS



Siemens

Siemens Saudi Arabia has been part of the Kingdom’s journey for nearly 100 years, uniting Digital Industries, Smart Infrastructure, Electrification & Automation, and Grid Software to build a smarter, more resilient future. Through innovation, digitalization, and strong local partnerships, Siemens Saudi Arabia empowers national transformation and supports Vision 2030.

SIEMENS

ONE

Our purpose has guided us
for more than 175 years:

We create technology
to transform the everyday,
for everyone.

Gridscale X

Digital transformation easier, faster, and at scale with modular software that exemplifies our design principles

Electrification X

One integrated IoT suite to master the key challenges of the **Energy transition**

- **Scale grid capacity**, **DERs**, and **customer satisfaction**
- Maximize existing grid assets with smarter operations
- Unlock DER flexibility and optimize CAPEX decisions
- Enable the shift toward **autonomous grid management**
- Ensure **uninterrupted power** for critical infrastructure
- Drive the **energy transition** with real, reliable data
- Enhance **sustainability** and **digitization** across distribution

siemens.com/sa

SESP

المعهد السعودي التقني لخدمات الكهرباء

SAUDI ELECTRIC SERVICES POLYTECHNIC

Saudi Electric Services Polytechnic (SESP)

Saudi Electric Services Polytechnic (SESP) was established in September 2012 and is a leading center of vocational training in the Kingdom of Saudi Arabia, specializing in delivering highly qualified trainees to the power utility industries. SESP is driving the future of sustainable energy through strategic partnership. Our vision is to empower the next generation through an advanced curriculum and intensive courses in renewable energy.

Local and international accreditations

Our Partners

rtc@sesp.edu.sa

sesp.edu.sa

Powering the Future

World-Class Vocational Training for the Energy Sector

Our Vision

To be a world-class vocational training institution that is agile and responsive to the evolving workforce needs of the energy sector.

Our Mission

To safely, effectively, and efficiently train and develop a highly skilled and agile workforce for the public and private sectors in Saudi Arabia.

SESP in Numbers

2012
Established

6,000+
Graduates

50+
Endorsed Training Programs

3+
Campuses Across the Kingdom

120+
Trainers & Technical Staffs

10+
International Accreditations

15+
National & International Partners

SESP Training Programs

S.N	Courses Name (Diploma/Associate Diploma Programs (12–24 months))
1	Solar Energy
2	Renewable Energy Technology
3	Hydrogen Technology
4	Smart Grid
5	Electrical Network Operation
6	Power System Protection & Control
7	Electric Power Cables
8	Overhead Line Maintenance
9	Electrical Distribution Network Maintenance
10	Power System Dispatching
11	HVAC & Refrigeration
12	Power Plant Mechanical Maintenance
13	Power Plant Operation
14	Power Plant Electrical Maintenance
15	Health, Safety & Environment Technology
16	Foreman
17	SCADA & System Control
18	Electrical Metering Inspection
19	Electrical Technician
20	Pipefitting Technician
21	Instrumentation Technician
22	Welding Technician
23	Scaffolding Technician
24	Rebar Fixing Technician
25	Carpentry Technician
26	Facility Maintenance
27	Substation Electrical Maintenance

Scan for More Programs

TENAS

Established in 2000 in the Kingdom of Saudi Arabia, TENAS Factory specializes in manufacturing low and medium voltage electrical and telecommunication network equipment. With over 25 years of experience, TENAS is a leading industrial player in the Middle East. The facility spans 25,000 square meters, equipped with advanced machinery and skilled personnel, aligned with Saudi Vision 2030.Localize manufacturing through international partnerships, transfer advanced technology to Saudi Arabia.

TENAS FACTORY

YOUR RIGHT CHOICE
YOUR RIGHT CONNECTION

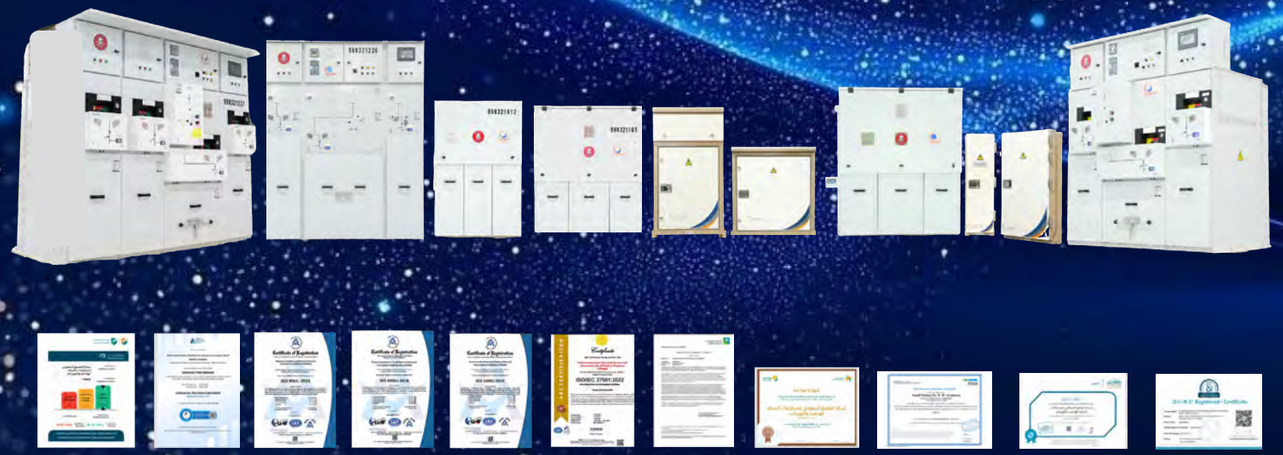
ART OF
Green Power

Medium Voltage :

- RMU 17.5KV
- SMART RMU 36KV
- SMART MRMU 17.5KV
- AMRMU 17.5KV 4 WAY
- SMART MRMU 36KV
- ARMU 36KV

Low Voltage:

- METER BOX – SINGLE AND DOUBLE
- DISTRIBUTION PILLAR (MINI PILLAR) – WITH GENERATOR / WITHOUT GENERATOR
- PMT CABINET
- CABLE LUGS
- CONNECTORS (COPPER & ALUMINUM)
- OVERHEAD

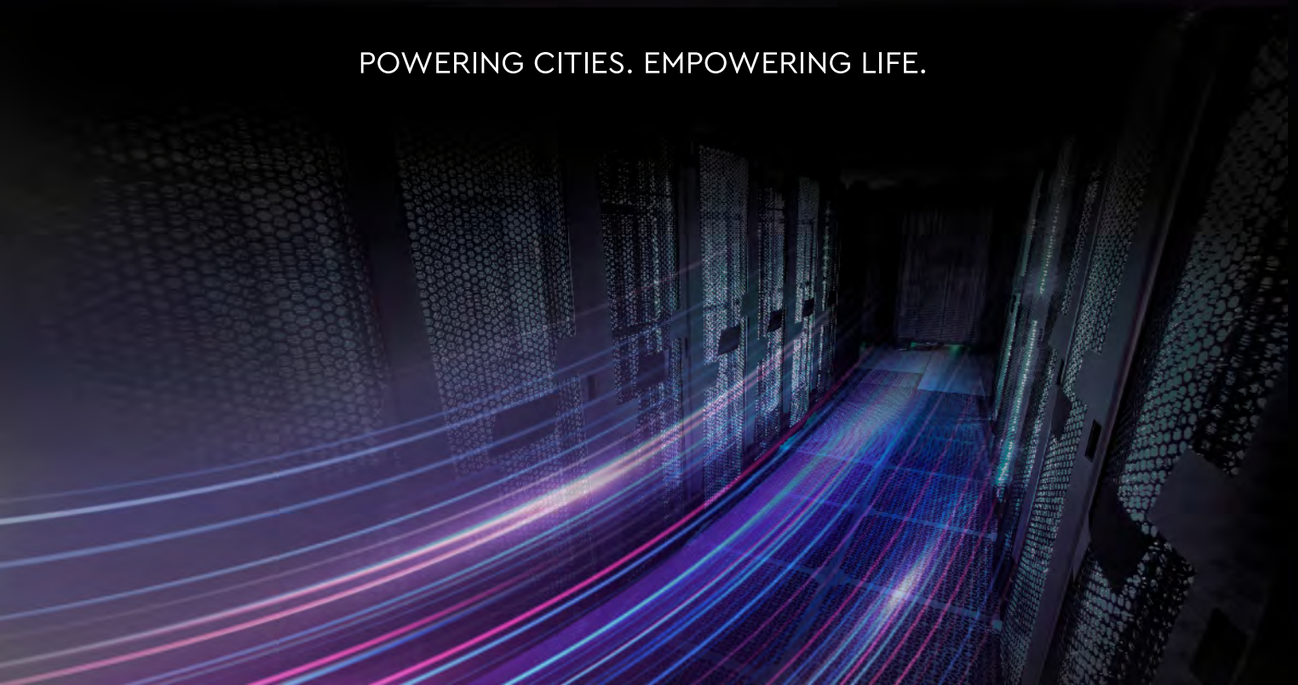


Tenas_factory1

www.tenasfactory.com

UTEC

POWERING CITIES. EMPOWERING LIFE.



UTEC

UTEC has been a leading Power Solution with more than 120,000 square meters of manufacturing footprint across several factories producing Medium Power Oil Transformers, Dry Type Distribution Transformers, Unit, Package, Prefabricated and Mobile Substations, Medium Voltage Switchgear, Low Voltage Switchgears, All type of Pannels and Modular Prefabricated Data Center.

UTEC IN BRIEF

- UTEC, a subsidiary of Bawan Group established in 2001 as joint venture between "Bawan" and "Wilson Transformers", a leading manufacturer of power and distribution transformers in Australia since 1933.
- Since then, UTEC has been a leading Power Solutions provider with more than 200,000 square meters of manufacturing footprint across several factories producing Medium Power Oil Transformers, Dry Type Distribution Transformers, Unit, Package, Prefabricated & Mobile Substations, Medium Voltage & Low Voltage Switchgears, All type of Panels and Modular Prefabricated Data Centers.
- UTEC Quality solutions are serving all Saudi Market Segments, such as Utility, Mega constructions & infrastructure, Oil & Gas, Water, Industry, Transportation, Data Center, and Urban developments.
- UTEC products and solutions are also available on the grid in more than 23 countries across the world.
- In addition to products, UTEC Services arm offers its customers a wide range of services including Testing, Commissioning, Installation, Preventive Maintenance, Engineering & Design, Modifications, Upgradation, Retrofit, Partial Discharge monitoring, Thermal Monitoring, Control and much more.

A leading electrical & energy equipment manufacturer operating seven factories in Riyadh, Saudi Arabia, offering:

- Distribution Transformers up to 10 MVA - 36 kV
- Smart Transformers (Control & Condition Based Actions)
- Special Application Transformers (Green, Solar, Seismic rated .... Etc)
- MV Switchgear up to 36 kV
- RMU and Smart RMUs up to 36 kV
- LV Switchgear and Motor control centres (Schnieder Blokset) up to 50 kA/6300 A
- All types of LV Panel Boards
- Package & Unit Substations up to 3150 kVA/36 kV
- Mobile Substations up to 36 kV
- Prefabricated modular Data Centres from 10 KVA (All in one) up to 2 MVA (scalable type)

Full fledge Services offering

- Installation, Testing, Pre-Commissioning and Commissioning.
- Preventive maintenance work of all Electrical Equipment.
- Design, Modification of Engineering works.
- Different Services for Electrical Equipment
- Supervision of Electrical Installation.
- Modification Activities / Upgrading of Electrical Equipment.
- Transformer Oil treatment & purification .
- Replacement and Retrofitting for Electrical Equipment.
- Protection Relay setting and Coordination Study.
- Maintenance, Refurbishment, Re-conditioning including transformer rewinding.
- Spare Parts Components Supply.
- LSTK Projects For Electrical Equipment.
- Online cleaning

Gulfpower

Deliver best-in-class customer experience and add value to our stakeholders while investing in our people, protecting the environment, and enabling digitalization in power and beyond.

GULFPOWER
ELECTRICAL POWER GENERATOR

About us

GULFPOWER is a leading provider of power solutions in Saudi Arabia and the Middle East, recognized for its commitment to quality and innovation. Established with a vision to meet the region's growing energy demands, GULFPOWER specializes in designing and manufacturing diesel generator sets, distribution panels, fuel systems, and more.

With a strong focus on excellence, GULFPOWER sources components from globally renowned brands to deliver premium energy solutions. All products are rigorously tested before delivery, ensuring compliance with international standards and certifications.

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to deliver premium energy solutions. All products are rigorously tested
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certifications.

As part of its legacy, GULFPOWER benefits from the expertise and global reach of Al-Khorayef Group, which has established a presence in over 40 countries across six continents. This affiliation strengthens GULFPOWER's position as a trusted leader in the energy sector, providing reliable and innovative solutions for diverse industries.

من نحن؟

قلف باور شركة سعودية رائدة في قطاع الطاقة، تجمع بين الابتكار والجودة لتقديم حلول شاملة تلبي احتياجات العملاء في المملكة والشرق الأوسط. بفضل خبرتها العميقة في تصميم وتصنيع مولدات الديزل، وأنظمة الوقود، ولوحات التوزيع، استطاعت قلف باور أن تضع بصمتها كشريك موثوق يقدم منتجات ذات كفاءة عالية

الجودة بالنسبة لـ قلف باور ليست خيارًا بل التزام. تستعين الشركة بمكونات من أفضل العلامات التجارية العالمية وتخضع جميع منتجاتها لاختبارات صارمة لضمان الامتثال للمعايير والشهادات الدولية، مما يعزز مكانتها كشركة تقدم حلول طاقة موثوقة ومستدامة

كجزء من مجموعة الخريف، التي تتمتع بحضور عالمي في أكثر من ٤٠ دولة، تواصل قلف باور توسيع آفاقها، مؤكدةً ريادتها كحلقة وصل أساسية في قطاع الطاقة لتقديم حلول متكاملة تدعم التطور والنمو في مختلف الصناعات

مجموعة الخريف
Alkhorayef Group

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At the Saudi Power Procurement Company, the executive arm of the Ministry of Energy chaired by HRH Prince Abdulaziz bin Salman, we ensure reliable power supply across the Kingdom and lead energy procurement. We work with global partners in renewable and thermal projects. Our participation in the Smart Grids Conference strengthens knowledge exchange and supports the development of advanced, efficient power networks

Huawei

Founded in 1987, Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. We have approximately 208,000 employees and we operate in over 170 countries and regions, serving more than three billion people around the world. We are committed to bringing digital to every person, home and organization for a fully connected, intelligent world.


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Smart Grid
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