
PROF. DR. ESSAM A. AL-AMMAR

الأستاذ الدكتور / عصام بن عبدالعزيز العمار



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[HTTP://FAC.KSU.EDU.SA/ESSAM/HOME](http://fac.ksu.edu.sa/essam/home)



PERSONAL INFO

Name: Essam A. Al-Ammar

Nationality: Saudi

SKILLS/EXPERIENCE TOPICS

Electricity Restructure, Electricity, Gas and Water Service Regulation, Technical Regulation, Economic Regulation, Energy Policy, Engineering, Smart Grids, Long Term Planning, Demand Forecasting, Consumers Behavior, Supply and Demand Management, Renewable Energy, Electric Vehicles, Electricity and Water Efficiency, Security of Supply, Metering/billing System, and Smart Metering, Cybersecurity for Water and Electricity Infrastructures, and Applications of Artificial Intelligence in Electricity.

Project Management, Value/Supply Chain; Following up the studies and projects, Change Management, Quality Assurance/Control, Policies and Procures Guidelines, Risk Management, Data Analysis Institutional Excellence, Strategic Planning, Developing and Following up KPIs, Current State Assessment, SWOT Analysis, Proof of Concept (PoC), Legal Background, Improvement of Service Quality, Cost/Benefit Analysis, Regulatory Analysis, Engineering Education, Strategic Partnership, International Cooperation/Partnership, Procurement and Training.

Motivation, Communication, Problem Solving, Decision Making, Conflict Management, Business Analysis: Needs Assessment, Planning, Analysis, Traceability and Monitoring, Evaluation.

Fourth Industrial Revolution (I4): Improving the Competitive value, Innovation, Green Skills, Industrial Ecosystem, Transfer and Adoption of Technology, Sustainable Development Framework, Development of Local Manpower Capabilities, and Integration Development Concept.

Digital Transformation (DX). Digital Strategies for Business: Customer Network Behaviors, Competition, Data, Innovation, Value. Platform Strategies. Digital Marketing: Engagement, Social Media, Planning and Analytics.

Customer Experience (CX): KPIs, Strategy, and Planning and Analytics

Good familiar with Privatization, Public Private Partnership (PPP), Private Sector Participation (PSP), Environmental Impact Analysis, Standardization, Localization, and Capacity Building.

EXPERIENCE

PROFESSOR (FULL), FACULTY OF ENGINEERING, KING SAUD UNIVERSITY

May 2022 – Now

Teaching and R&Ding

HEAD OF BUSINESS DEVELOPMENT, REMUS CORPORATION

April. 2022 – Now

Providing scientific and practical services and perform the work required for Remus Corporation. Reporting to the CEO on investors, financial institutions and government officials in Saudi Arabia to support oil exploration activities and projects worldwide. Also developing and maintaining healthy relationships for Remus Corporation with local investors and financial institutions.

ASSOCIATE PROFESSOR, FACULTY OF ENGINEERING, KING SAUD UNIVERSITY

Jan. 2012 – May 2022

Teaching and R&Ding

DIRECTOR, MASTER OF SCIENCE IN NUCLEAR ENGINEERING PROGRAM, KING SAUD UNIVERSITY

Nov. 2019 – Now

Managing all aspects of MS in Nuclear Engineering program including funding, researching topics, faculty allocation, and advising students on academic matters

GOVERNOR'S ADVISOR, ELECTRICITY AND COGENERATION REGULATORY AUTHORITY (ECRA) [NOW BECOMES WATER AND ELECTRICITY REGULATORY AUTHORITY (WERA)]

JUNE 2012 – JULY 2019

Advising on issues related to power, electricity, gas, water and energy as well as strategic consulting

CHAIR COORDINATOR AND EXECUTIVE MEMBER IN SAUDI ARAMCO CHAIR IN ELECTRICAL POWER

Nov. 2008 – Jan 2015

Coordinating King Saud University and Saudi Aramco with respects of researching issues related to Electrical Power

ADVISOR AT MINISTRY OF WATER AND ELECTRICITY

Dec. 2008 – Oct 2012

Advising on the issues related to Electrical Power

ENERGY CONSULTANT AT RIYADH TECHNO VALLEY

Dec. 2009 – Oct. 2011

Advising on the issues related to Energy and Desalination

FORMAL MEMBER OF EVALUATION OF ENVIRONMENTAL CONSIDERATIONS FOR ELECTRIC GRID IN ARAB STATES, ARABIC LEAGUE, EGYPT

Oct. 2009 – Feb. 2011

Setting up and reviewing the environmental factors for the electric grids in Arab states.

ASSISTANT PROFESSOR, FACULTY OF ENGINEERING, KING SAUD UNIVERSITY

Aug. 2007 – Jan. 2012

Teaching and Researching

**RESEARCH/TEACHING ASSISTANT AT ARIZONA STATE UNIVERSITY, TEMPE, ARIZONA,
USA**

Aug. 2003 – Aug. 2007

RESEARCH ASSISTANT AT UNIVERSITY OF ALABAMA, TUSCALOOSA, ALABAMA, USA

Aug. 2001 – Aug. 2003

**POWER/SOFTWARE ENGINEER IN LUCENT TECHNOLOGY COMPANY, RIYADH, SAUDI
ARABIA**

Aug. 1997 – Sep. 1999

EDUCATION

PHD IN ELECTRICAL ENGINEERING/AUG. 2007

Arizona State University, Tempe, Arizona, USA

MS IN ELECTRICAL ENGINEERING/AUG. 2003

University of Alabama, Tuscaloosa, Alabama, USA

MASTER OF BUSINESS ADMINISTRATION (MBA)/JULY 2021

York St John University, York, UK, majoring in Strategic Leadership

BS (HONS) IN ELECTRICAL ENGINEERING/MAY 1997

King Saud University, Riyadh, Saudi Arabia

POSTGRADUATE DIPLOMA (WITH DISTINCTION) IN DIGITAL BUSINESS/FEB. 2021

EMERITUS Institute of Management, Singapore, in collaboration with MIT Sloan Executive
Education and Columbia Business School

POST-CRISIS LEADERSHIP EXECUTIVE PROGRAM/JULY 2020

University of South Florida, Tampa, Florida, USA

CERTIFICATIONS

PMI RISK MANAGEMENT PROFESSIONAL (PMI-RMP)®

Issue date: Jan. 2022. Credential ID: 3203660
https://www.credly.com/badges/c0e44722-f131-4dcb-b7b5-9472db17c6de?source=linked_in_profile

PMI PROFESSIONAL IN BUSINESS ANALYSIS (PMI-PBA)®

Issue date: Feb. 2021. Credential ID: 2982509
https://www.youracclaim.com/badges/87e30a43-9e9e-4937-a488-8ca9115573f7?source=linked_in_profile

PROJECT MANAGEMENT PROFESSIONAL (PMP)®

Issue date: Jan. 2021. Credential ID: 2978286
https://www.youracclaim.com/badges/41a7dd7e-6b5c-4fc9-a141-0c7e9db3a318?source=linked_in_profile

MIMIC SOCIAL CERTIFICATE

Issue date: Jan. 2021. Credential ID: 62fc7df29e
<https://home.stukent.com/certificate/62fc7df29e>

MIMIC PRO CERTIFICATE

Issue date: Dec. 2020. Credential ID: 62fc7df29e
<https://home.stukent.com/certificate/62fc7df29e>

PROJECTS MANAGEMENT (EXAMPLES)

Many projects have been involved and managed, and required in general installation, coordination with other stakeholders, presentation, extensive meetings, data validations, reporting, and sometimes PR, including but not limited to:

- 1- "PropView" Platform business development: designing/identifying/applying digital strategies for business, digital platform success, and digital marketing strategies
- 2- Long Term Planning of Electricity and Water and their needs of Fuel - (Budget: SAR 20 million)
- 3- Electricity and Water End Use study in Saudi Arabia - (Budget: SAR 80 million)
- 4- Development of a Roadmap for Wholesale Competitive Electricity Market (CEM) in Saudi Arabia – (Budget: SAR 3.0 million)
- 5- Development of electricity market rules, bilateral contracts' arrangements, and regulations – (Budget: SAR 17.0 million)
- 6- Combined Heat and Power - (Budget: SAR 1.1 million)
- 7- Regulating, Evaluating and Monitoring the Desalination Industry in Saudi Arabia - (Budget: SAR 3.5 million)
- 8- A Strategy for Smart Meters and Smart Grids in the Kingdom of Saudi Arabia - (Budget: SAR 3.2 million)

- 9- Policies and Procures Guidelines - (Budget: SAR 1.55 million)
- 10- Water Service Regulation studies (including strategy, KPIs, water quality, tariff) - (Budget: SAR 15 million)
- 11- Assessing and Monitoring Overall Performance of the Electricity Metering for SEC's Residential and Commercial Customers - (Budget: SAR 3.15 million)
- 12- Gas Service Regulation studies (including strategy, KPIs) - (Budget: SAR 2.8 million)
- 13- Reliability Assessment of SEC electric grid - (Budget: SAR 3.2 million)
- 14- Improvement of Electrical Power Quality in Industrial, Commercial, and Residential Buildings in Riyadh - (Budget: SAR 1.72 million)
- 15- Feasibility Study of Establishing a National Industry to Produce Spare Parts of the Electric Generation, Transmission and Distribution in the Kingdom of Saudi Arabia - (Budget: SAR 1.61 million)

TRAININGS

Post-Crisis Leadership Program, July 2020, University of Southern Florida, Tampa, Florida, USA

KPIs and Benchmarks, Dec. 2019, Riyadh, Saudi Arabia

Total Quality Management, Oct. 2019, Riyadh, Saudi Arabia

Regulatory Impact Analysis, 2018, Rome, Italy

Work Stress Management, 2018, Riyadh, Saudi Arabia

Information Security, 2018, Riyadh, Saudi Arabia

ERRA Training Course: Introduction to Water Utility Regulation, 2017, Budapest, Hungary

Emotional Intelligence, 2017, Riyadh, Saudi Arabia

Accounting Principles, 2016, Riyadh, Saudi Arabia

Qualitative Analysis of Research, 2016, Riyadh, Saudi Arabia

Short Courses on Long Term Planning of Electricity and Water and their needs of Fuel, (2014 - 2015), Riyadh, Saudi Arabia

On the topics:

- Electricity and water forecast
- Security of Supply
- Generation/Production Portfolios
- Technologies Selections

ERRA New Commissioners, 2014, Abu Dhabi, UAE

ERRA Summer School: Introduction to Energy Regulation, 2013, Budapest, Hungary

Project Management, 2007, Riyadh, Saudi Arabia

Combined Cycle Gas Turbines, June 2014, Cranfield University, Cranfield, Bedford, UK

Mini MBA: Green Energy Economics, June 2013, London, UK

Short Courses on Fire Safety Aspects, (Feb., 2004, Mar. 2005, Feb. 2006, and Feb. 2007), Arizona State University, Tempe, Arizona, USA

COMMITTEES INVOLVEMENT

Many committees/Board member/Associate member have been involved (mostly leading), *including but not limited to:*

- 1- National Mining Committee (Federation of Saudi Chambers), 2021 – now.
- 2- Saudi Nuclear Society (Majmaah University), 2021 - now.
- 3- Steering Committee of Water Regulation (Ministry of Environment Water and Agriculture), 2020 – now.
- 4- Preparatory Committee of Water Regulation (Ministry of Environment Water and Agriculture), 2020 – now.
- 5- Nuclear Engineering Program (King Saud University), 2019 – now.
- 6- Incentivizing the Environment of the Innovation and Technology in the Industrial Sector (Federation of Saudi Chambers), 2019 - 2020
- 7- Energy Pricing for Industrial Sector (Federation of Saudi Chambers), 2019 – 2020.
- 8- Team of Administrative and Career Development and Training, 2018 – 2019.
- 9- Water Service Regulation Team, 2017 – 2019.
- 10- Developing Electricity Market Rules and Bilateral Contracts, 2017 – 2019.
- 11- Gas Service Regulation Team, 2017 – 2019.
- 12- Assess and monitor SEC meters, 2017 – 2018.
- 13- Planning Committee (ECRA), 2017 – 2018.
- 14- Long Term Planning of Electricity and Water and their needs of Fuel, 2013-2016.
- 15- Developing Competitive Electricity Market (CEM), 2014-2015.
- 16- Combined Heat and Power, 2013- 2014.
- 17- Regulating, Evaluating and Monitoring the Desalination Industry in Saudi Arabia, 2015.
- 18- Policies and Procures Guidelines (ECRA), 2014-2015.
- 19- Training Committee (ECRA), 2013-2015.
- 20- Projects Procurement Committee (ECRA), 2014-2015
- 21- Electricity and Water End Use study in Saudi Arabia, 2013-2017.
- 22- Reliability Assessment of SEC Electric Grid, 2012-2014.
- 23- Improvement of Electrical Power Quality in Industrial, Commercial, and Residential Buildings (MOWE), 2012-2015.
- 24- Scientific Engineering and Industrial Group (KACAST), 2013 – 2014.
- 25- Feasibility Study of Establishing a National Industry to Produce Spare Parts of the Electric Generation, Transmission and Distribution in the Kingdom of Saudi Arabia (MOWE), 2010-2015
- 26- Land Requirements for renewable energy projects in the Kingdom of Saudi Arabia (MOWE), 2012.
- 27- Arab Solar Energy Plan Team (MOWE), Arab League, Egypt, 2010.

28- Clean Development Mechanism (MOWE), 2010-2011

AWARDS

- 1- Saudi Arabia Who's Who, Arab News, December 2019.
- 2- Discoveries, Innovation and Technology Licensing Award, King Saud University, April 2015.
- 3- Best paper Award, International Conference on Electrical Engineering (ICEE), Paper title "Keeping the Battery Energy Storage System on using Reference Compensation Method for Dispatchable Wind," Korea, Jul 2014.
- 4- Gold medal at International Exhibition of Geneva inventions, for the patent "Systems and methods for solar water purification," Geneva, April 2014.
- 5- PhD Graduate Scholarship to Arizona State University, Tempe, Arizona, USA, Ministry of Higher Education, Jan 2003.
- 6- MSc Graduate Scholarship to University of Alabama, Tuscaloosa, Alabama, USA, Ministry of Higher Education, Jan 2000.

LANGUAGES

Arabic and English (fluently writing, reading, speaking and professionally presenting)

VOLUNTARY ACTIVITIES / COMMUNITY SERVICES

Writing Arabic articles in weekly basis in local newspaper such as Al Eqtisadiyah, Al Jazeera .. etc in many topics and issues, such as Energy, Electricity, Water, Service Regulation, Covid-19, Consumers Behavior, Fourth Industrial Revolution (I4), AI/IoT, Digital Transformation (DX), Customer Experience (CX), Standardization, Localization, and Capacity Building. For more info, please visit:

<https://www.aleqt.com/taxonomy/term/21326>

Arranging and managing students trip to PP9 (SEC ninth power plant)

Addressing lectures in high schools in the electricity/water conservation

PUBLICATIONS

More than 130 papers and 20 patents, can be found in:

<https://faculty.ksu.edu.sa/en/essam/page/377593>