

Rabih Elie El Medawar

Energy and Electric Utility Consultant | L&D practitioner | Trainer |
MBA | M.Sc.Eng. | CEM® | CRM® | CWEP®

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Summary

Energy and Electric Utility Consultant, Environmentalist, Instructor, Learning & Development and Quality Control practitioner, Trainer, and Manager.

Holds an M.Sc. in electrical engineering and an MBA in management.

Experienced in management, electrical testing practices and tools, technical support, training, tendering, sustainable electrical design for all types of facilities and infrastructure, electrical safety procedures, site supervision, operations, preventive maintenance planning and techniques, value engineering, renewable energy systems and network losses reduction.

Worked on multiple major projects in the power and energy field of high complexity requiring innovative solutions demonstrating high levels of technical knowledge, ingenuity, and creativity while exercising independent initiative and judgment in setting and implementing goals. Also Assisted in the tendering process of several large scale energy-related projects.

Worked with universities on several research projects in the fields of electrical distribution, e-mobility, renewable energy and artificial intelligence and as instructor for electrical engineering students courses

Able to mentor staff of various skills and personalities, including both technical staff and other managers and also able to negotiate complex arrangements with other groups, service providers, collaborators, and vendors.

Regularly attends several international exhibitions and conferences related to power and energy with the purpose of continuous development of knowledge in the field.

Education

Master's degree, Electrical and Electronics Engineering	2004 -
Lebanese University	2009
Master of Business Administration	2014 -
Sagesse University	2017

Work experience

Instructor	November 2020 -
Lebanese University - Faculty of Engineering II	Present
<ul style="list-style-type: none">• Instructor of the electrical installation course for electrical engineering students (Medium and low voltage installations)	

Independent Energy and Electric Utility Consultant	October 2020 -
	Present
<ul style="list-style-type: none">• Energy and Water management:<ul style="list-style-type: none">◦ Optimization of energy performance for buildings, facilities and industrial plants◦ Improving water usage and efficiency in existing Buildings, Facilities and Industrial Plants◦ Implementing sustainability programs for organizations◦ Measurement, Monitoring and analysis of energy and water performance◦ Carbon reduction or GHG emissions audits, quantification and reporting according to international guidelines• Renewable energy Projects development:<ul style="list-style-type: none">◦ Design and feasibility studies for renewable energy projects◦ Implementation of pilot projects◦ Audit on existing projects performance• Utility management :<ul style="list-style-type: none">◦ Planning, design, construction, operation & maintenance for electrical networks◦ Asset management ,preventive maintenance planning and resources optimization◦ Technical and Non-Technical power losses reduction◦ Network operation training (electrical works, assets survey and testing...)	

Skills

- Electrical Assets Testing
- Training and Personnel Development
- Operations Management and Maintenance Planning
- Research and Development
- Electrical Safety
- Energy efficiency and Carbon Reduction
- Network Digitalization and Decarbonization
- MEP building Services

Certifications

- Managing Safely - IOSH
- Certified Energy Manager - Association of Energy Engineers
- Certified Water Efficiency Professional - Association of Energy Engineers
- Carbon Reduction Manager -Association of Energy Engineers
- Learning and Development - Formatech
- Public Speaking and Presentation skills - ILM
- Partial Discharge Diagnostics - Omicron
- Power Grid Testing and Maintenance - Omicron
- High Voltage Cable Faults Detection - Megger
- MV Cable Joints and Terminations Assembly - ERDF
- Installation of MV Heat Shrinkable & Resin Cable Accessories - Elcon Megarad
- Preparation for LEED GA - Ecoconsulting
- Welding and ASME certification - BUTEC
- Public Service and Social Responsibility - BUS

Organizations

- Order of Engineers and Architects - Member
- Association of Energy Engineers - Member
- International Solar Energy Society - Member

Languages

- Arabic , French and English

- MEP Consultancy :
 - Building services design, supervision, value engineering and shop drawings development.
- Electrical Safety consulting and risk management:
 - Safety procedures and site works risk assessment and mitigation
 - Electrical Safety training (management and site works)
- Training and Personnel development:
 - Learning and Development consultancy for SME's
 - Technical and soft skills training delivery
 - Development of high performance training programs

Learning & Development and Quality Control Manager April 2017 - September 2020
 BUTEC Utility Services s.a.l

- Technical quality control :
 - Managing site inspection teams for different type of facilities and works.
 - Quality assessment and specs conformity of all material purchased by BUS and Subcontractors.
 - Recommendations for all Area managers on the quality of work supplied by Subs.
 - Analysis of NCR forms from Area managers.
- Training and personnel development :
 - Responsible for the development of the training center.
 - Conducting different technical training sessions covering the field of electrical distribution networks , electrical safety and other various topics .
 - Managing and scheduling technical training.
 - Setting monthly training calendar and quarterly targets.
 - Update of the current training material and Development of new technical training.
 - Engagement and assessment of new trainers.
 - Yearly reassessments for all technical personnel
- Technical and Non-Technical Losses Reduction :
 - Quantification of total losses
 - Calculation and Monitoring of Energy Balance
 - Development and implementation of a detailed total losses reduction plan
 - Managing field fraud detection teams
 - Introduction of field fraud detection tools
 - Research and testing for technical losses detection
 - Analysis of Smart metering Data for fraud detection and losses reduction
 - Managing data analysis teams for fraud detection
- Documentation and R&D (Research and Development):
 - Centralization of guidelines , rules of technical implementation , specifications and methods of statements.
 - Documentation of all training , seminars and research.
 - Development of guides and manuals for all special tools.
 - Introduction of new technologies in the utility fields.
 - Development of Condition base testing and preventive maintenance methodology.
 - Design of Renewable Energy Pilot Projects and grid Impact assessments (PV plants and E-mobility applications).
 - Support Engineering Students in Final Year Projects.
- Plans and programs update:
 - Regular update of the plans and programs as required by the contract with clients.

Operation and Maintenance Division Manager March 2012 - March 2017
 BUTEC Utility Services s.a.l

Head of Operation and Maintenance of the electrical distribution network in Zone 2 of the DSP Project:

- Managing, supervising and controlling maintenance teams responsible for the following:
 - Medium voltage network from HV/MV substation to MV/LV substation (Underground and overhead networks, cable joints, lines installation.) including MV switchgear, MV cables, MV joints and terminations, transformers installation, Low Voltage Main Distribution Panels, and Feeders.

- Low Voltage network from MV/LV substations to clients including all related network assets(Poles, aerial cables, underground cables, and customers meter rooms) Installation of customers' electrical connection and meters and all associated equipment to the proper functioning of the power service.
- Conducting training for Medium voltage and low voltage cable joints and terminations, overhead electrical lines works, safety precautions, and measures.
- Survey of Existing Medium Voltage and Low voltage lines for GIS integration. Survey of all existing Electrical Network assets for the issuing of maintenance plan.
- Installation of electronic meters for the AMI pilot project.
- Managing the relationship with subcontractors, municipalities and public authorities.

Electrical Design Engineer

October 2009 -

EMDC Group

February 2012

- Design, supervision, value engineering and shop drawings of the following systems: Lighting, Sports lighting, Area lighting, Power, Exit & Emergency, Fire Alarm, Information Technology, Audio Visual, Lightning and Earthing, Access control.

Electrical Site Engineer

June 2009 -

NN electric

September 2009

- Follow up of all electrical works, issuing of shop drawings and design modifications, ensuring the correct implementation of all plans and managing of teams. Follow up of the procurement of all needed material. Supervision on the assembly of distribution panels.

Electrical Design Engineer

July 2008 -

SDT International

May 2009

- Design of the following systems: Lighting, Sports lighting, Area lighting, Power, Exit & Emergency, Fire Alarm, Information Technology, Audio Visual, Lightning and Earthing, Access control.

Special Projects

- Design and construction of a solar powered electrical boat capable of drawing energy from the sun, charging its batteries and navigating through water while holding two passengers. The Solar boat participated in a race organized by the MOE on August 2019
 - Design and construction of fully autonomous off-grid facility located at 2000 meters above sea level. The facility is built from repurposed material, is solar powered and has its own water treatment plant.
 - Design and construction of three solar power plants, 3.3KWp , 6 KWp and 20 KWp as part of a pilot project rollout to mitigate the Lebanese network power outages and load shedding and eliminating the use of diesel powered generator for several types of facilities.
 - Research, procurement and Installation of one of the first networks of level 2 electrical vehicles chargers (4 chargers) in Lebanon for corporate use, the Chargers drew power from a solar powered facility hence reducing transportation carbon footprint.
 - Testing and launch of a new methodology for medium voltage power lines inspection using autonomous drones. The drone collected images for analysis and preventive maintenance purposes
 - Design of a self balancing, two wheeled autonomous robot. The project was in completion of the electrical engineering diploma at the Lebanese university.
 - Design of Medium Voltage and low voltage infrastructure network for Berbera Port (Somalia) expansion works .
 - Shop Drawings of Medium Voltage and Low Voltage network for Tripoli Port Expansion works.
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