

Holds B. Sc. in Electronics & Telecommunications Engineering, M. Sc. in Renewable Energy and the Environment and PhD in Electrical Engineering. Has over 28 years hands-on experience, including 14 years in the Egyptian New and Renewable Energy Authority (NREA) (PV Department Manager), 10 years in KSA technical colleges, lately under GIZ (HoD, Electrical and Electronics) and 1.4 years in the Egyptian Central Energy Efficiency Unit (Technical Director).

PERSONAL DATA

Nationality : Egyptian
Birth Date : 20/01/1965
Gender : Male
Marital Status : Married
Residence : Heliopolis, Cairo

EDUCATION

- : B. Sc. in Electronics & Telecommunications Engineering, Zagazig University, 1987
- : M. Sc. in Renewable Energy and the Environment, Reading University (United Kingdom), 1994
- : PhD in Electrical Engineering, Zagazig University, 2001

LANGUAGES

Arabic : Native Language
English : Excellent

COMPUTER SKILLS

- : Windows, MS Office (Word, Excel), Internet
- : Programming in Assembly, C++, Basic, Data Base III Plus and Lab View
- : Quatro Pro, Grapher spread sheet, AutoCAD
- : PSpice software package for circuit analysis
- : Electronic Workbench software package for PCB development
- : Primavera software for Project Management

TRAINING COURSES AND CERTIFICATIONS

- : Intensive course for a week in the German Aerospace Centre DLR on the Testing Procedures for Concentrated Solar Power CSP system and components (Dec. 1999).

- : 2 months hands-on training on Concentrated Solar Power CSP systems (parabolic trough, power tower and dish) for power generation and water desalination in the Spanish Plataforma Solare de Almeria PSA. (Oct./Nov. 1999).
- : Full year Advanced Electronic Design Ad Hoc Course in the Department of Cybernetics of Reading University of U.K. (from Mar. 1994 till Mar. 1995).
- : One week course in the Italian company Lastem which work in instrumentation and Data Acquisition Systems DAS (Mar. 1992).
- : Two weeks course in the Italian Italsolar, PV module manufacture (Mar. 1992).
- : 6 months course on Instrumentation, Distributed Control System DCS, SCADA and Data Acquisition including programming with Labview by CompuTRONICS Information Technology Company (from Mar. till Jul. 2004).
- : 2 months course in Successful Leadership Skills in the National Planning Institute (Oct./Nov. 2002).
- : 5 months course in Project Management and Planning using PREMAVERA software in the National Planning Institute (from Oct. 2001 till Feb. 2002).
- : 8 months course in Control System Design using the micro-controller/micro-processor in the National Electronic Research Centre (from Nov. 2000 till Jul. 2001).
- : Full year English language course in the British Council in Cairo (1992 - 1993).
- : 2 months Programming Course in C++ language in IBM World Trade Corporation (from Apr. till Jun. 1992).

CHRONOLOGICAL EXPERIENCE RECORD

- Employer** : Alobour University (under construction)
- Job title** : Head of Department R.E.
- Job Description** : Teaching electronic courses in its engineering high institute.
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- Dates** : From Jun. 2016 till Aug. 2017
- Job Description** : Construction Manager & R.E. Consultant and member of operating committee for Egypt first on-grid 1MWp on Medium Voltage for Onera Systems Company.
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- Dates** : From Oct. 2014 till Dec. 2015
- Job Description** : Technical Director at the Egyptian Central Energy Efficiency Unit ECEEU under IDSC.
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- Dates** : From Sep. 2004 till Jul. 2014
- Employer** : Yanbu College of Applied Technology in K.S.A.
- Job title** : Head of Department Electrical & Electronics
- Job Description** :
 - Leading 30+ multi discipline trainers and employees.
 - The college is governmental and run by the German GIZ with English as teaching medium and the modern teaching techniques are applied.
 - Including similar position at other two traditional colleges in KSA.

Dates : From Jun. 1990 till Sep. 2010
Employer : Egyptian New and Renewable Energy Authority (NREA)
Project : Photovoltaic Department Manager

Main Recent Activities:

- Energy Policy and Strategy for Egypt: Work closely with EU-TARES and created renewable energy & energy efficiency policies & strategies. The energy intensive sectors such as industry, transport, tourism, buildings and street lighting are targeted with effective policy packages over the three time phases, short, medium and long terms.
- Egy-sun Project Manager: It is an integrated initiative of solar energy and efficient lighting. Through which, we have established 33 small scale, on-grid, photovoltaic systems totaling 577 kW_p power and 36 efficient lighting system totaling 530 kW power, all implemented for governmental entities. I was responsible for the management of those projects from A to Z. I have developed and standardized the entire project management process. I developed the cooperation protocol with the owner, the tender document with up-to-date specifications, scoring system, tables for the tender analysis, the analysis report and the project acceptance testing. We also have our own financing scheme for it.
- Setting up a 25% renewable energy share in the new establishment for the tourist sector, plus developing the tender document for land usufruct for R.E. power stations for the Tourist Development Authority. Participate in the national committee for preparing renewable energy and energy efficiency courses for the Ministry of Education. Attracting international fund.
- Prepare and conduct regular hands-on training courses mainly include: "Quality Assurance of small-scale on-grid PV power station", "Solar Tracking Systems", "Photovoltaic Water Pumping Systems" and "PV Systems Design" in RCREEE for Egyptian & Arab scholars (started in Jan. 2016 – Time being).

PROJECTS EXPERIENCE:

- Bringing my Intelligent Sun Tracking System to Egypt Market: That was my Ph.D. research work which is been realized, technically, as a market product. The system is based on embedded control using PIC micro-controller and integrates between two tracking techniques: active sensing and constant speed at the two axes. Though it is the first Egyptian contribution in the solar energy controller product, it remarkably paves the way for the second generation of sun tracking (2003, Cairo).
- Development of a Photovoltaic Cell Characterization System: That was my Master Degree research work in Reading university of UK in which a computer based PV cell characterization system was developed. The system includes: variable irradiance lighting rig, water cooling loop, inclined electronic load line circuit, data acquisition card and C++ programming (1994, Reading University - UK).
- Development of an Analog Sun Tracker: That project was under the contract signed between BP Solar Company and Reading University for developing a cost effective on-grid PV concentrator. It was made for a fresnel lens PV concentrator string mounted on the polar angle and tracking in one axis based on active sensing (1994, Reading University -

UK).

- Development of PV Battery Charge Regulator: with temperature compensation (1995, Reading University - UK).
- I also Lead the following projects:
 - Design, install and operate a 1.5 kW_p PV system for electrifying the "talented student centre" in Alkharj college of technology in K.S.A. (2012).
 - Supervise several solar energy graduation projects for the student in different colleges of technology in K.S.A. (2006 - 2014).
 - Design, install and operate a 5 kW_p photovoltaic system for a remote high-rank visitors house in Zulfi National Park in K.S.A. (Jan. 2005).
- I also Participate as team member in the following projects:
 - Setting up the technical and financial proposal, feasibility study, tender and call for bidding then shortlisting the complying bidders in the Egypt pilot large Integrated Solar Combined Cycle power station of 150MW at Kureimat where the GEF granted the incremental cost (2001 – 2004).
 - Joint work experience with international companies such as the American Solarex, the German Siemens, AEG, Engcotec and the Italian Italsolar CISE, Lastem.
 - Upgrading the Data Acquisition Systems in 4 labs in NREA using National Instrument cards hardware and Lab View programming as software (2004).
 - Obtaining ISO 9001/2000 for NREA laboratories including setting up and design of all ISO forms, certifications and documentations based on the test process in each lab (2004).
 - Designing several DC/ac photovoltaic systems for electrification, deep well water pumping and others.
 - Assessing & contributing in the International Electro-Technical Committee (IEC) proposals in the field of photovoltaic energy.
 - Preparing the feasibility study made for 10 MWp photovoltaic deep well water pumping for irrigation and electrification in Toshki region in conjunction with the Japanese JAICA (2000).
 - Prepare and teach lectures for regional specialists in the field of solar radiation, photovoltaic system design and requirements.
 - Conducting a comprehensive testing on a photovoltaic deep well water pumping system in NREA outdoor lab in conjunction with the European Union within the context of AVICENNE Program ended up with a big comprehensive report (1997).
 - Repairing electronic faults in the a\m units.
 - Conducting the consultancy services for 20 kWp and 10 kWp photovoltaic electrification systems including installation, supervision and the acceptance testing for Elain Essokhna Toll-Station and Suez Truck-Balance (1998).
 - Installing and testing 4 unit of (3 kWp each) photovoltaic deep well pumping at Awlad Eshiekh village (1995).
 - Installing and testing 2.2 Wp photovoltaic deep well pumping system at Ennobarya (1992).
 - Conducting partial installation, hence the entire Acceptance Testing and commissioning of Wadi Errayan Ice Making Plant of 38 Wp

Photovoltaic/diesel hybrid system (1991).

- Preparation of the tender document for the establishment of NREA photovoltaic labs facilities; hence installation, acceptance testing and commissioning (1991-1993).
- NGO membership in the Association for Renewable Energy & Environment Protection AREEP.

PUBLICATIONS:

- To Establish a "Fair" Renewable Energy Tariff for Egypt (July 2016). The 1st round (in Sept; 2014) was averaging 14 c\$/kWh for solar and 10.5 c\$/kWh for wind. I appreciated (in July 2016), 5-7 c\$/kWh for solar and 5 c\$/kWh for wind. MERE declares the 2nd round (in Sept; 2016) 8 c\$/kWh solar and 6 c\$/kWh wind.
- Quality Assurance of Small Scale On-grid PV Plant in the international workshop in the League of Arab States LAS; Quality Assurance of PV Power Plants (14 Dec. 2015, Cairo).
- Egyptian Central Energy Efficiency Unit, Mandate and Accomplishments in Egypt-Japan Relation and Sustainable Development Future, Energy Rational for Example (Sep. 2015).
- Lessons Learned from Simulating the PV Water Pumping System Field-testing in the Third International Conference and Trade Fair for Environment Management and Technologies (29:31 October 2001, Cairo).
- Intelligent Sun Tracker in the Third International Conference and Trade Fair for Environment Management and Technologies (29:31 October 2001, Cairo).
- Automatic Solar Tracking System in the AFRO - ASIAN International Conference for regional power development and energy trading through interconnections (12:15 December 1998, Cairo).
- The Emerging Thin-film Technology in the 2nd symposium & exhibition on renewable energy and modern technologies for environment protection (14:16 September 1998, Ismailia).
- Simulated Field-testing for PV Water Pumping is an exhaustive report I produced in November 1996 covering the simulation for the PV water pumping field-testing in full details. NREA's PV outdoor lab was used for conducting the test. The testing activities were made within the context of a European-Mediterranean cooperation program called AVICENNE. A copy of the report was submitted to the European Commission's science, research and development department (1997, Madrid).
- Photovoltaic Cell Interface to the Computer in the fourth conference on renewable energy organized by ESES & NREL (14:18 April 1996, Cairo).
- PV Technology Worldwide and NREA Accomplishments Towards Sustainable Energy Supply For Remote Areas in the Arab Petroleum and Mineral Association Seminar (11:13 October 1995, Cairo).

- Field of experience :**
- Experienced strategic leader, energy sector. I have a broad management and solid technical background in solar energy and thus can make significant contribution to the business success in reaching its specific goals in real environment.
 - Values: safety, business results, collaboration, integrity and sustainability.
 - Contributions: Strategic development, execution through the line, risk

focus, cross-functions, customer thinking and engagement on the ground.

- Licenses: Renewable Energy Consultant + Expert Member in RCREEE + Pan-Arab Certified Energy Management Professional PA-CEMP.