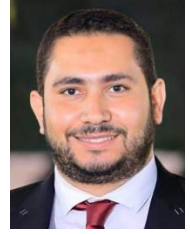


Mohamed Osama Abd El-Raouf Mahmoud

Name of Firm Housing and Building National Research Center HBRC
Profession Electromechanical expert
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Personal Data

- ❖ **Date of Birth** : 27/6/1991
- ❖ **Nationality** : Egyptian
- ❖ **Marital status** : Married
- ❖ **Gender** : Male

EXECUTIVE SUMMARY

- ❖ A Professional with 9 years of experiences in Electromechanical huge projects
- ❖ Strong technical writing skills as well as strong communication skills
- ❖ Public speaking and presentation skills with excellent organizational skills
- ❖ Strong written and verbal communication skills with demonstrated ability to conduct effective presentations
- ❖ Excellent writing and communication skills required with proven customer interactions
- ❖ Strong written and verbal communication skills with demonstrated ability to conduct effective presentations and written report preparation required
- ❖ Working knowledge of MS Word, MS Project and Excel and strong report writing skills
- ❖ Strong technical proposal preparation skills
- ❖ A refined professional thoroughly exposed to various functional areas through a number of competencies - enhancement training sessions conducted by National Standard institutes in testing and calibration fields
- ❖ Team player possessing strong planning and organizational skills
- ❖ High level of communication skill and ability to effectively engage internal and external stakeholders.

Education

- ❖ **Shoubra Faculty of engineering, Benha university, Egypt**
 - Ph.D. Degree in Electrical Power System Engineering
 - **Year:** 2019
 - **Title:** Modelling and Optimization of Renewable Energy Systems for a New Community in Desert Regions
- ❖ **Shoubra Faculty of engineering, Benha university, Egypt**
 - M. Sc. Degree in Electrical Power System Engineering
 - **Year:** 2016
 - **Title:** Development and Control of Hybrid Renewable Energy Systems Using AI Techniques

❖ **Shoubra Faculty of engineering, Benha university, Egypt**

- B.Sc. Degree in Electrical Power Engineering

- **Year:** 2013

- **Accumulated grade:** Excellent with honors

- **Percent:** 86%

- **Project grade:** Excellent

Experiences

Housing and Building National Research Center HBRC	
From (March 2021) To (Till Now)	Technical Manager in Electro mechanical institute
From (Aug 2016) To (2019)	Researcher in Building Physics and Environmental Research institute
From (2015) To (2016)	Assistant Researcher in Building Physics and Environmental Research institute
From (2017) To (Till Now)	Member in the committee of preparation of the Egyptian code of electrical works
	Member in the committee of preparation of the Egyptian code for lifts
	Member in the committee of preparation of the Egyptian code of fiber optics
	Member in the construction committee
	Instructor course of “improve energy efficiency in residential, commercial and governmental buildings, the principals of green, sustainable architecture and green pyramid”
Instructor course of “Code for electrical installations in buildings ”	
From (2016) To (Till Now)	<p>Works as a consultant (manager) of electrical works associated with some projects such as:</p> <p><u>Project 1:</u> <i><u>The social housing project in an area of 800 acres in the new 6th of October City, it consists of 1200 residential buildings with its services (schools, malls, nursery, medical center, playgrounds, Police department and administrative buildings ...etc.). the systems are carried in this project includes supervision the implementation on the following:</u></i></p> <ul style="list-style-type: none"> - Electrical distribution networks for buildings. - light current networks. - Low voltage switchgears. - Earthing (grounding) systems. <p><u>Project 2:</u> <i><u>The social housing project (sakan misr) in the 6th October Gardens City, it consists of 217 residential buildings with its services (schools, malls, nursery, medical center, playgrounds, Police department and administrative buildings ...etc.). the systems are carried out in this project includes supervision the implementation on the following:</u></i></p> <ul style="list-style-type: none"> - Electrical distribution networks for buildings. - light current networks. - Low voltage switchgears. - Earthing (grounding) systems.

Project 3:

The social housing project (Dar misr) in the 6 th October City, it consists of 137 residential buildings. the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for buildings.
- light current networks.
- Pumping and elevator systems.
- Low voltage switchgears.
- Earthing (grounding) systems.

Project 4:

The social housing project in the 6 th October Gardens City, in the area of 390 feddan it consists of 310 residential buildings with its services (schools, malls, nursery, medical center, playgrounds, Police department and administrative buildings ...etc.). the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for buildings.
- light current networks.
- Low voltage switchgears.
- Earthing (grounding) systems.

Project 5:

The social housing project (Housing for all Egyptians) in the 6 th October Gardens, it consists of 80 residential buildings with its services (schools, malls, nursery, medical center, playgrounds, Police department and administrative buildings ...etc.). the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for buildings.
- light current networks.
- Low voltage switchgears.
- Earthing (grounding) systems.

Project 6:

The social housing project (Alternative housing project towers)in the 6 th October Gardens, it consists of 38 residential building towers (10 floors), the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for buildings.
- light current networks.
- Low voltage switchgears.
- Pumping and elevator systems.
- Earthing (grounding) systems.

Project 7:

The sewage pump station project in the 6th October Gardens City, in the area of 390 feddan its sewage pump capacity of 460 l/s. the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for the station.
- light current networks.
- Low voltage switchgears.
- medium voltage switchgears.
- Earthing (grounding) systems.

Project 8:

The sewage pump stations project in the badr City, the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for the station.
- light current networks.
- Low voltage switchgears.
- medium voltage switchgears.
- Earthing (grounding) systems.

Project 9:

The project of developing the Salloum land port in cooperation with the General Authority for Land and Dry Ports, Participated in the Review of all Design /Engineering outputs. Which consist of, Preliminary Design Reports, Final Design Reports, Feasibility Studies, Tender Documents and Tender Evaluation Reports.

These projects are as follows: the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for the land port.
- light current networks.
- security networks systems.
- Low voltage switchgears.
- medium voltage switchgears.
- Earthing (grounding) systems.

Project 10:

The project of developing the 15 may library in the city of 15 may in cooperation with National Library and Archives Authority, the systems are carried out in this project includes supervision the implementation on the following:

- Electrical distribution networks for the library.
- light current networks.
- Low voltage switchgears.
- Earthing (grounding) systems.

Project 11:

The project of developing the land ports of Qastal and Arkin in cooperation with the General Authority for Land and Dry Ports, the systems are carried out in this project includes supervision the implementation on the following:

CCTV SYSTEMS NETWORKS & Nano stations.

Design Project Manager of electrical works

From (2017) To (Till Now)

Works as Design Project Manager of electrical works associated with some projects such as:

Design of the electrical and light current networks includes: (lighting & sockets & UPS& data and telephone & CCTV& sound system & public address & fire alarm& load schedule & single line diagrams of electrical panels & access doors. etc.) for the following projects:

- HALLS of the Central Auditing Organization (Egypt) Salah Salem St, Ash Sharekat, Nasr City, Cairo Governorate.
- The building of the Central Auditing Organization (Egypt) the branch of Mansoura governorate.
- Marine Science Building in Alexandria Governorate
- Anousheh Youth Center in Alexandria Governorate
- The new autopsy complex in "Badr" is a leap within the international systems. the new

	<p>complex is built on 10 acres and accommodates 1,000 cases and serves 16 governorates and has a center for unidentified bodies.</p> <ul style="list-style-type: none"> • Electrical designs for green housing buildings projects in Egypt. • Electrical designs for the building of NISSAN in the 6 th October city. • Electrical designs drawings for the Optical store of the Arab International Optical Company • Nozha Al-Andalus housing project in New Cairo, affiliated to the Urban Communities Authority. • Construction of the security inspection building at the Salloum land port. • Project to complete the construction of 10 residential buildings of the Cooperative Society for Construction and Housing in Suez Governorate. • Cafeteria of the security inspection building at the Salloum land port. • The Italian Hospital Project in Alexandria.
From (2013) To (2015)	Instructor at Thebes Academy (Thebes Higher Institute of engineering)
From (2013) To (2015)	Electrical design engineer at Office of Engineering Consultancy in Saudi Arabia Heritage Foundation charity (Jeddah)

Research activity

1. Ibrahim, Mohamed E., M. Osama Abed El-Raouf, and Nourhan A. Mohamed. "Towards a Generalized Electric Breakdown Mechanism of Insulating Nano fluids." In *Nano Hybrids and Composites*, vol. 36, pp. 81-88. Trans Tech Publications Ltd, 2022.
2. Fahmy M El Bendery M. Osama abed El-Raouf, Adel. Mallawany, Mohamed I. Mosaad, Mahmoud A. Al-Ahmar "Optimization of PV/Wind/Fuel cell Hybrid System for A New Community in Egypt, Case Study, New El-Farafra Oasis" 12th International Conference on NANO-TECHNOLOGY for GREEN and SUSTAINABLE CONSTRUCTION (NTC 2021) 12-16 March, 2021, Sharm El-Sheikh, Egypt.
3. Tawfiq, A. A., M. El-Raouf, A. A. El-Gawad, and M. A. Farahat. "Reliability assessment for electrical power generation system based on advanced Markov process combined with blocks diagram." *International Journal of Electrical & Computer Engineering (2088-8708)* 11, no. 5 (2021).
4. Tawfiq, Aiman Abd Elkader, Mohamed Osama Abed El-Raouf, Mohamed I. Mosaad, Amal Farouk Abdel Gawad, and Mohamed Abd El Fatah Farahat. "Optimal reliability study of grid-connected PV systems using evolutionary computing techniques." *IEEE Access* 9 (2021): 42125-42139.
5. Tawfiq, Aiman Abdel Kader, Mohamed Abed El-Raouf, Amal Abdel Gawad, and Mohamed Farahat. "Analysis the Impact of Renewable Energy Based-Wind Farms Installed with Electrical Power Generation System on Reliability Assessment." *International Journal of Renewable Energy Research (IJRER)* 10, no. 4 (2020): 1595-1607.
6. Hassanein, Wael S., Marwa M. Ahmed, M. Osama abed El-Raouf, Mohamed G. Ashmawy, and Mohamed I. Mosaad. "Performance improvement of off-grid hybrid renewable energy system using dynamic voltage restorer." *Alexandria Engineering Journal* 59, no. 3 (2020): 1567-1581.

7. M. O. Abed El-Raouf, M. I. Mosaad, M. A. Al-Ahmar, and F. M. Bendary, "Optimal PI controller of DVR to enhance the performance of hybrid power system feeding a remote area in Egypt," *Sustainable Cities and Society*, vol. 47, p. 101469, May 2019.
8. M. O. Abed El-Raouf, M. I. Mosaad, M. A. Al-Ahmar, and F. A. Banakher, "Maximum Power Point Tracking of PV system Based Cuckoo Search Algorithm; review and comparison," *Energy Procedia*, vol. 162, pp. 117–126, Apr. 2019.
9. M. Osama abed el-Raouf, M. I. Mosaad, A. Mallawany, M. A. Al-Ahmar, and F. M El Bendary optimal control of DVR to enhance the power quality of PV/wind/fuel cell hybrid system feeding a new community. 25th International Conference on Electricity Distribution (CIRED) Madrid, 3-6 June 2019.
10. M. O. abed El-Raouf, M. I. Mosaad, A. Mallawany, M. A. Al-Ahmar, and F. M. E. Bendary, "MPPT of PV-Wind-Fuel Cell of Off-Grid Hybrid System for a New Community," 2018 Twentieth International Middle East Power Systems Conference (MEPCON), Dec. 2018.
11. M. Osama abed el-Raouf, A. Mallawany, M. I. Mosaad, M. A. Al-Ahmar, and F. M El Bendary, "Day Lighting as a tool of Energy Saving in Buildings for Remote Regions," *International Journal of Advances in Scientific Research and Engineering*, vol. 4, no. 7, pp. 79–88, Jul. 2018.
12. M. O. abed el-Raouf, M. I. Mosaad, M. A. Al-Ahmar, and F. M El Bendary, "Techno-Economic Analysis of Hybrid Renewable Energy Power Network for New Community in Egypt, Case Study New El-Farafra Oasis," *International Journal of Engineering Research and Advanced Technology*, vol. 4, no. 5, pp. 40–55, 2018.
13. M. Osama abed El-Raouf, A. Mallawany, M. I. Mosaad, M. A. Al-Ahmar, and F. M El Bendary, "Optimal design of Renewable Energy, Water and sewage Pumping System for a community, Case Study New El-Farafra Oasis, Egypt" *International Journal of Scientific Research & Engineering Trends* Vol. 4, Issue 6, Nov-Dec-2018.
14. M. Osama abed El-Raouf, Mahmoud A. Al-Ahmar, Fahmy M El Bendary "Simulation and Optimization of Standalone Hybrid (PV / Biomass) Energy Systems for home" 9 th international conference on Nano technology in construction (NTC 2017) – Sharm El-Sheikh-Egypt.
15. M. Osama abed El-Raouf, Mohamed I. Mosaad, Mahmoud A. Al-Ahmar, Fahmy M El Bendary "Development, Simulation and Optimization of Hybrid (PV/Wind) Renewable Energy System for a Residential Building" 8 th international conference on Nano technology in construction (NTC 2016) – Sharm El-Sheikh-Egypt.
16. M. Osama abed El-Raouf, Mohamed I. Mosaad, Mahmoud A. Al-Ahmar, Fahmy M El Bendary "Hybrid solar-wind-grid power generation system; modelling, simulation and MPPT" Recent Trends in Energy Systems Conference (RTES) Cairo, Egypt, pp.172–180, 3 October 2015.
17. El-Raouf, M.O.A., Mosaad, M.I., Al-Ahmar, M.A. and El Bendary, F.M. (2015) "MPPT of hybrid solar-wind-grid power generation system" *Int. J. Industrial Electronics and Drives*, Vol. 2, No. 4, pp.234–241, 2015

Research interest

- ❖ Renewable energy systems
- ❖ energy saving in buildings.
- ❖ Energy efficiency.
- ❖ Hybrid Renewable Energy systems
- ❖ Renewable Energy based Embedded systems.
- ❖ Power system stability.
- ❖ Power quality.
- ❖ Energy management.

A reviewer in a set of journals such as: HBRC Journal, IEEE ACCESS, Ambient energy journal.

Courses:

- ❖ AutoCAD.
- ❖ Power system distribution basic course.
- ❖ ICDL Course.
- ❖ Toefl course.
- ❖ Classic control circuit Course.
- ❖ C++ course.
- ❖ Mat lap course.

Languages:

- ❖ Arabic: Mother Tongue
- ❖ English: Very good spoken and written

Computer Skills:

- ❖ Advanced skills in MS office (Word, Excel, PowerPoint and Outlook Express)
- ❖ Working effectively with all Microsoft Office versions
- ❖ Working effectively with Microsoft project

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