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**1. EDUCATION**

<u>DATE</u>	<u>INSTITUTION</u>	<u>CERTIFICATE</u>
January 2023	New Mexico State University	PhD Electrical Engineering(ongoing)
2015- 2018	University of Energy and Natural Resource	MSc. Sustainable Energy Management
2011- 2013	Kwame Nkrumah University of Science and Technology (KNUST)	Commonwealth Executive Master of Business Administration (EMBA)
2004-2008	Kwame Nkrumah University of Science and Technology (KNUST)	BSc. Electric/Electronic Engineering
2001-2003	Opoku Ware School	Senior Secondary School Certificate

**2. OTHER PROFESSIONAL QUALIFICATIONS**

June, 2015	Energy commission, Ghana	Certified Electrical Wiring Professional (CEWP), Commercial division
July, 2014	University of Energy and Natural Resource/DENG	Off-grid solar PV Installation
July, 2020	Huawei Academy	Huawei Networking Certification-Instructor division
August 2022	Energy Commission	Certified Energy Auditor

**3. MEMBERSHIP OF PROFESSIONAL BODIES**

- Ghana institution of Engineers (GhIE)
- Certified electrical wiring professional Association of Ghana
- University Teachers Association of Ghana (UTAG)
- Student Member, IEEE
- President, NMSU Ghana Students Association, 2023-2024 academic year

**4. Employment Records & Positions Held/Hold (with dates):**

<b>Period</b>	<b>Employing organization; title/position.</b>	<b>Summary of activities performed relevant to the Assignment</b>
June 2024- to date	New Mexico State University Job Title: <i>Graduate Research Assistant</i>	<ul style="list-style-type: none"> <li>• Research on renewable energy integration in power systems.</li> <li>• Electricity markets</li> </ul>
Jan- May 2023	New Mexico State University Job Title: <i>Graduate Teaching Assistant</i>	<ul style="list-style-type: none"> <li>• Preparation of practical laboratory for undergraduates</li> <li>• Grading undergraduate assignments and lab work</li> <li>• Assisting undergraduates in capstone project</li> <li>• Tutorial for students</li> </ul>
December 2018 to Date	University of Energy and Natural Resources	<ul style="list-style-type: none"> <li>• Teaching Engineering Students</li> <li>• Supervise undergraduate students</li> <li>• Conducting Research</li> </ul>

	Job Title: <i>Lecturer (currently, on study leave)</i>	<ul style="list-style-type: none"> <li>• Undertaking Outreach Activities.</li> <li>• Academic counselling</li> </ul>
July 2013-December 2018	Glo mobile Ghana Job Title: <i>Area Technical Head</i>	<ul style="list-style-type: none"> <li>• Supervision of other contractors. I.e. passive and other civil or installations on the network</li> <li>• Random/periodic site visits to perform upgrades.</li> <li>• Installation of battery banks</li> <li>• Prepare weekly report on the performance of the network in terms of site outages, causes and give recommendations and subsequently implement changes to minimize downtime hours.</li> </ul>
January 2011-December 2013	Reime Ghana Limited Job Title: <i>Manager/Technical Head, Northern Zone</i>	<ul style="list-style-type: none"> <li>• Installation of microwave antennas</li> <li>• Maintenance of deep cycle battery back ups</li> <li>• Preparing link budget for microwave links.</li> <li>• Installing and maintaining PV for cell sites</li> </ul>
October 2009-December 2010	Melicom Ghana Limited Job Title: <i>Area Radio Engineer</i>	<ul style="list-style-type: none"> <li>• Planned/unplanned maintenance of equipment.</li> <li>• Fine tuning microwave links</li> <li>• Maintaining satisfactory conditions of sites</li> <li>• Maintenance of battery backups and rectifiers</li> <li>• Installing new batteries and rectifiers</li> </ul>

## 5. SOFTWARE COMPETENCY

- SAM, ETAP,
- OpenDSS,
- PSS/E, Hommer,
- Autocad,
- Helioscope,
- PowerWorld,
- Matlab,
- Python,
- Julia

## 6. SELECTED PUBLICATIONS

- J. Ansu, F. Wang and Di Shi “Impact Assessment of Synthetic Inertia and Demand Response on Unit Commitment in Electricity Markets” North American Power Symposium, 2024”
- Techno-economic challenges of pumped hydro energy storage, ISBN 9780128188538, <https://doi.org/10.1016/B978-0-12-818853-8.00011-X>.  
(<https://www.sciencedirect.com/science/article/pii/B978012818853800011X>)
- ‘Pumped hydro Energy Storage for Hybrid Systems’  
(<https://books.google.com/books?hl=en&lr=&id=zd9CEAAQBAJ&oi=fnd&pg=PP1&ots=w73kO-9LN5&sig=y6LoiI5dOtbDn2jzqetA38Ctlhw#v=onepage&q&f=false>)
- Assessment and modelling electricity demand response potential in Ghana, a case study of Sunyani Municipal. (MSc. Thesis submitted to the graduate school, University of energy and Natural Resources in 2018)
- Ansu Gyabaah, J., & Owusu-Afriyie, P. “A Review of Electricity Market Reforms and Regulations in Ghana” Volume 5, Issue 11, November – 2020 International Journal of Innovative Science and Research Technology ISSN No: -2456-2165
- Gyabaah, J. A., Twumasi, E. and Gyamfi, S. (2021). Saving Electricity in an emergency, experiences from some countries and lessons for Ghana. ADRRI Journal of Engineering and Technology, Ghana: Vol. 5, No. 3 (4), Pp. 1-16, E-ISSN: 2026-674X, 31st December 2021

## 7. CONFERENCE ATTENDED/ PRESENTATIONS

- Rural electrification and feasibility of solar home systems for rural households in northern Ghana. In proceedings of 51<sup>st</sup> Annual conference of Ghana Institution of Engineers (GhiE)
- IEEE Conference on emerging trends on circuit design, 2019
- Renewable Energy fair, 2019
- Huawei ICT /networking training, 2020
- ICEASSM conference, 2019
- AGI Energy Service center training of trainers' workshop on RE and EE, 2020
- Presentation at New Mexico State University Research and creativity week, February 2024 (Multi-Scenario analysis of unit commitment considering demand response and synthetic inertia in electricity markets)
- WERC Environmental design contest award winner (3<sup>RD</sup> PLACE)
- EUMP conference 2024
- North American Power Symposium, 2024, presented a research article titled: "Impact Assessment of Synthetic Inertia and Demand Response on Unit Commitment in Electricity Markets"

## 8. RESEARCH INTEREST

- Power systems optimization
- Electricity markets
- Renewable energy
- Demand response
- Application of ML and AI in power systems

## 9. REFEREES

- **Fengyu Wang, PhD**  
Klipsch School of Electrical Engineering  
New Mexico State University, NM  
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- **Samuel Gyamfi, PhD**  
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