

ABRIDGED CURRICULUM VITAE OF ING. DR. EDWARD A. AWAFO

1. PERSONAL DETAILS

Name: Ing. Dr. Edward Abingya Awafo, PE-GhIE

Nationality: Ghanaian

Email Address: edward.awafo@uenr.edu.gh (Official); awafoc@hotmail.com (Private)

2. EDUCATION AND TRAINING

Nov. 2017 PhD in Food and Postharvest Engineering, KNUST.

Nov. 2014 Certificate in Energy Sector Strategies to Support Green Growth. Awarded by the World Bank/e-institute for Development.

July 2012 Certificate in Biogas Technology. Awarded by Biogas Institute of Ministry of Agriculture (BIOMA), China.

July 2003 BSc. in Agricultural Engineering, KNUST.

3. BRIEF PROFILE

Ing. Dr. Edward Abingya Awafo is a Senior Lecturer with the Department of Agricultural and Bioresources Engineering at the University of Energy and Natural Resources (UENR) in Sunyani. Edward's expertise and training are in Food and Postharvest Engineering; Energy Systems and Policies; Climate Change Mitigation and Adaptation. Ing. Dr. Awafo has special interest, and has gained enormous experience, in developing and managing energy and climate change related projects. He has secured funding worth millions of United States Dollars in these areas and has managed many funded research grants and projects. Ing. Dr. Awafo has consulted for many national and international organizations, including Ghana's Ministries of Energy and Environment, West African Science Service Center on Climate Change and Adapted Land Use (WASCAL), Environmental Protection Agency (EPA), Council for Scientific and Industrial Research (CSIR), United Nations Agencies, German Development Cooperation (GIZ), Global Green Growth Institute (GGGI), World Bank, International Renewable Energy Agency (IRENA), ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), European Commission (EC), West African Development Bank (BOAD), The Swiss National Science Foundation (SNF), etc.

Edward has very good grasp of the emerging sustainable energy and environment narrative in Africa and has travelled widely across the world, participating and contributing to knowledge and learning on these. Edward's passion is in collaborating with professionals from different disciplines to develop new skills and solve new challenges.

Ing. Dr. Edward Abingya Awafo is a registered Professional Engineer with the Ghana Institution of Engineering (PE-GhIE) in good standing.

4. SUMMARY OF RELEVANT WORKING EXPERIENCE

Rank (Period)	Employer
Senior Lecturer (February, 2022 to date)	University of Energy and Natural Resources (UENR), Sunyani
Lecturer (February, 2018 to January, 2022)	University of Energy and Natural Resources (UENR), Sunyani
Projects Coordinator & Research Fellow (October, 2011 to January, 2018)	The Brew-Hammond Energy Centre, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi
Energy and Environment Consultant (2010 to date)	Several institutions

5. ACADEMIC AND RESEARCH FOCUS

- Energy policies and systems
- Climate change and development
- Postharvest Engineering

6. TEACHING AND SUPERVISION

- Thesis Supervision: 5 PhD students (UENR and KNUST - on-going); 8 MSc students (UENR - 4 completed; 4 on-going) and over 18 undergraduate students supervised.
- Teaching: Energy policies and markets; renewable energy conversion technologies; energy systems; waste to energy; postharvest engineering

7. SELECTED SERVICES TO COMMUNITY (University, Nation, International)

- a) Member**, Board of School of Engineering, UENR; February, 2022 to date
- b) Coordinator**, School of Engineering Postgraduate Programmes and **Member** of Graduate School Board; September 2020 to date
- c) Internal Examiner for Postgraduate Theses**, Department of Energy and Petroleum Engineering; March 2021 to date
- d) Chairman**, Research and Grants Committee, Department of Mechanical & Manufacturing Engineering; September 2019 to date
- e) Member/Secretary**, Selection committee to consider applicants for PhD scholarship awards at KNUST; August 2019
- f) Review Editor**, Urban Energy End-Use; February 2020 to present
- g) Reviewer**, Several reputable scientific journals; September 2019 to present
- h) Founding Member**, Africa Mini-Grids Community of Practice (AMG – CoP); April 2017 to present
- i) Senior Strategic Advisor**, Africa LEDS Partnership; April 2017 to present

8. SELECTED RESEARCH GRANTS SECURED

Title	Role	Funding Agency	Period
Renewable energies for Africa: effective valorisation of agri-food wastes (REFLECT Africa Project)	Principal Investigator	European Commission	2021 – 2026
Catalyzing Climate Action Solutions for upscaling of Ecobased Adaptation (EBA) through targeted Productive actions	Principal Investigator and Coordinator	United Nations Environment Programme (UNEP)	2021 -2022
Energy System Modelling for the Real World: Transforming Modelling Approaches for Sustainable and Resilient Urban Development (SPIRIT Project)	Principal Investigator	Swiss National Science Foundation (SNF)	2020 -2023
Hybrid solar PV and waste-to-energy project in Ghana	Principal Investigator	German Ministry of Education and Research (BMBF), Germany	2020-2023
Energy and Water Mapping in the Cocoa Value Chain in Ghana	Lead Researcher	GIZ	2019 - 2020

9. SELECTED PUBLICATIONS

a) **Journal Articles**

1. Gilbert Kofi Selormey, Benedict Barnes, **Edward A. Awafo**, Francis Kemausuor, Lawrence Darkwah (2022). Development of mathematical model for predicting methane-to-carbon dioxide proportion in anaerobic biodegradability of cattle blood and rumen content. *Energy Conversion and Management*: X <https://doi.org/10.1016/j.ecmx.2022.100250>.
2. Sarquah Khadija, Satyanarayana Narra, Gesa Beck, **Edward A. Awafo**, and Edward Antwi (2022). Bibliometric Analysis; Characteristics and Trends of Refuse Derived Fuel Research. *Sustainability* 14, no. 4: 1994. <https://doi.org/10.3390/su14041994>
3. **Edward A. Awafo** and Prosper Achaw Owusu (2021). Energy and water mapping of the cocoa value chain in Ghana. *Sustainable Production and Consumption*, 29(2022): 341-356 <https://doi.org/10.1016/j.spc.2021.10.027>
4. Gilbert Ayine Akolgo, **Edward A. Awafo**, Eric Osei Essandoh, Prosper A. Owusu, Felix Uba and Kofi A. Adu-Poku (2021). Assessment of the Potential of Charred Briquettes of Sawdust, Rice and Coconut Husks: Using Water Boiling and User Acceptability Tests. *Scientific African*, 12(2021) e00789. <https://doi.org/10.1016/j.sciaf.2021.e00789>

5. **Edward A. Awaf**o and Joshua Amenorfe (2021). Techno-Economic Studies of an Industrial Biogas Plant to be implemented at Kumasi Abattoir in Ghana. *Scientific African*, 11 (2021) e00712. <https://doi.org/10.1016/j.sciaf.2021.e00712>
6. **Edward A. Awaf**o and Victor K. Agyeman (2020). Development of biogas resources and technologies in Ghana, a survey. *International Journal of Energy and Environment*, 11(3): 167-178
7. **Edward A. Awaf**o, Samuel Nketsiah, Mumin Alhassan, Ebenezer Appiah-Kubi (2020). Design, construction, and performance evaluation of an evaporative cooling system for tomatoes storage. *Agricultural Engineering*, 24(4):1-12. <https://doi.org/10.1515/agriceng-2020-0031>
8. Akolgo, G. A., Kemausuor, F., **Awaf**o, **Edward A.**, Amankwah, E., Atta-Darkwa, T., Essandoh, E. O. & de Freitas Maia, C. M. B. (2020). Biochar as a Soil Amendment Tool: Effects on Soil Properties and Yield of Maize and Cabbage in Brong-Ahafo Region, Ghana. *Open Journal of Soil Science*, 10(03), 91
9. Emmanuel Amankwah, **Edward A. Awaf**o & Thomas Atta-Darkwah (2020). Socioeconomic Impact of Development Projects on the Livelihood of Farmers: A Case Study of the Bui Dam Hydroelectric Project. *Journal of Geography, Environment and Earth Science International*, 24(1), 34-44. <https://doi.org/10.9734/jgeesi/2020/v24i130192>
10. **Awaf**o, **Edward**, Addo Ahmad and Bart-Plange, Ato (2019). Performance Analysis of a Desiccant Evaporative Cooling System for Mango Fruit Storage in the Savannah and Transitional Zones of Ghana. *Agricultural Engineering*, 3(20):1-14. <https://doi:10.1515/agriceng-2019-0021>
11. **Awaf**o, **E. A.** and Dzisi, K. A. (2012b). Analytical Models and Design of Combined Dehumidification and Evaporative Cooling System for Mango Storage in Ghana. *International Journal of Current Research and Review*, 4(20): 177-187
12. **Awaf**o, **E.A.** and Dzisi, K. A. (2012a). Appropriate Design of Evaporative Cooler for Mango Storage in the Transitional and Savannah Zones of Ghana. *International Journal of Engineering Science Research*, 3(2): 687-695

b) Books and Book Chapters

13. Agyeman, V.K., **Awaf**o, **E.**, Kemausuor, F., Agyenim, F.B. and Decker, E.H. (2020). *Renewable energy resources for pilot project implementation in Ghana*. Accra: Council for Scientific and Industrial Research (CSIR). ISBN: 978-9988-63-204-8

14. **Awaf, E. A. (2014).** Assessing and communicating benefits of green growth. In: Brown, A. (ed). *Green Growth in Practice: Lessons from Country Experiences*. Seoul, Global Green Growth Institute, pp. 79 – 102.
15. Agbemabiese, L., **Awaf, E. A.**, Brew-Hammond, A. and Edjekumhene, I. (2014). *Ghana Renewables Readiness Assessment (RRA)*. Abu Dhabi, International Renewable Energy Agency (IRENA), pp 1 – 42.
16. Mulugetta, Y., Brew-Hammond, A., **Awaf, E. A.** and Kinteh, S. (2013). *The Gambia Renewables Readiness Assessment (RRA)*. Abu Dhabi, International Renewable Energy Agency (IRENA), pp 1 – 67.

c) Technical Reports

17. **Awaf, E.A. (2022).** *Report on catalysing climate action solutions for up-scaling of Ecosystem-based Adaptation (EBA) through Targeted Productive Actions*. Submitted to Africa Office, UN Environment Programme, Nairobi, Kenya.
18. **Awaf, E.A. (2020).** *Report on incentivising demand-driven implementation of Nationally Determined Contributions (NDCs)*. Submitted to Africa Office, UN Environment Programme, Nairobi, Kenya.
19. **Awaf, E.A.**, Mercy Derkyi and Richard Bannor (2019). *Report on feasibility study on renewable energies for pilot project implementation in Ghana*. Submitted to Council for Scientific and Industrial Research (CSIR), Accra, Ghana.
20. **Awaf, E. A. (2017).** *The Role of Modelling and Scenario Development in Long-Term Strategies*. Submitted to World Resources Institute (WRI), Washington D.C., USA.
21. **Awaf, E.A.** and Akuffo, F.O. (2011). *Final Technical Report on Field and Research Work on Modelling and Simulation of Evaporatively Cooled Storage Structure for Fruits in the Transitional and Savannah Zones of Ghana*. International Development Research Centre (IDRC). Ottawa, Canada. Report Number: 105
22. Ako Larbi, P., **Awaf, E. A.** and Rockson, G. (2007). *Technical Project Report on the Production and use of Jatropha Curcas as a Substitute for Fossil Fuels*. Prepared for UNESCO.

10. COMPETENCIES AND OTHER SKILLS

- a) Good at conducting quality research using modern methods and standard procedures
- b) Extensive knowledge of Microsoft office suites
- c) Excellent expertise in projects development and management
- d) Language: Excellent at both written and spoken English.
- e) Efficient, organized, reliable, dependable, fast-learner, highly motivated, gets the job done.

11. REFEREES

Available upon request