

**CV of Bismark Baah**  
Department of Mechanical Engineering  
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Phone #: 0242071680/0205455229

Bismark Baah has over 7 years of post-BSc experience as a mechanical engineer, energy auditor, and energy efficiency advisor. He is a certified energy auditor (a certified sustainable energy audit professional-Ghana, SEAP) and a member of the Ghana institution of engineering with a lot of experience in research and development (R&D) of energy systems including renewable energy (solar energy) energy efficiency management and climate impact, solar energy for cooling and cooking applications and food preservation, solar crop drying and solar water pumping. He has also attended several pieces of training and workshops on energy efficiency and management.

**PERSONAL INFORMATION**

Name: Bismark Baah

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**Nationality:** GHANAIAN

**Language skills:** English, Twi

**Education: MPhil, MECHANICAL ENGINEERING (Specialization: Thermo-Fluids and Energy Systems Engineering)**

Institution(s) Attended	Degree(s) or Diploma(s) obtained:
1. Kwame Nkrumah University of Science and Technology, Ghana	Ph.D. Sustainable Energy Technologies (ongoing)
2. Kwame Nkrumah University of Science and Technology, Ghana	MPhil, Mechanical Engineering
3. Kwame Nkrumah University of Science and Technology, Ghana	BSc. Mechanical Engineering (Second Class Honours, Upper Division)

**Key skills/expertise:** Energy Audit; Energy efficiency

**Technical tools and soft skills**

I have excellent research and development skills that enhance project execution such as

•Application of Engineering software for modelling mechanical systems

➤MATLAB ➤ TRNSYS ➤ PYTHON ➤ OSeMOSYS ➤ FlexTool

•Proficient user of Microsoft Office suite and digital skills

➤ Word ➤ Excel ➤ PowerPoint ➤ Project Scheduler ➤ RETScreen Expert ➤ Kobocollect toolbox ➤ Survey solutions ➤ Google Forms

**8. Specific teaching experience:**

Country	Date from - Date to
January 2022-Date	(Assistant Lecturer, Department of Mechanical engineering, KNUST) Teaching of undergraduate courses in thermodynamics I and II Heat transfer, Fluid Mechanics, Fluid dynamics I and II
September 2017- June 2018	(Demonstrator, Department of Mechanical engineering, KNUST) Tutored courses such as Fluid dynamics I and II, thermodynamics I and II, Heat transfer, Mechanical Engineering Lab., Air conditioning and Refrigeration, Renewable Energy Utilization, Behaviour of Real Fluids, Internal Combustion Engines, Automatic Control I
August 2014 –2016	(Research /Teaching Assistant). Tutored courses such as Fluid dynamics I and II, thermodynamics I and II, Heat transfer, Mechanical Engineering Lab., Air conditioning and Refrigeration, Renewable Energy Utilization, Behaviour of Real Fluids, Internal Combustion Engines, Automatic Control I

**9. Research/working experience:**

S/N	Item	Information
1	Date from - Date to	August 2021-July 2022
	Project Location	Ghana
	Client	GIZ
	Position	Technical experts
	Description	Involved in executing desk review of technical data sheets and SPIS designs submitted by the installers. Responsible for the field assessment works, data collection, and entry into the online platform (kobocollect)
2	Date from - Date to	January 2021 ongoing
	Project Location	Ghana
	Client	The Worldbank Group
	Position	Consultant (Energy and extractives)
	Description	Technical support (reporting and data analysis about procurement) to the Ghana Energy Sector Transformation Initiative Project - (P163984) under implementation; •Monitoring procurement processing against Procurement Plan timetable of the Ghana Energy Sector Transformation Initiative Project - (P163984); •Provide technical support to assess the energy demand (power and non-power) of the off-grid industries in Ghana and analyze the fuel needs, analyzing fuel options

		<ul style="list-style-type: none"> <li>• Provide support to the preparation of workshops and other similar events;</li> <li>• Provide technical support (data research and analysis).</li> <li>• Other technical tasks as needed.</li> </ul>
3	Date from - Date to	November 2020 to March 2021
	Project Location	Ghana
	Client	GIZ
	Position	Assistant coordinator
	Description	Needs Assessment, data collection and analysis, and development of competency-based training (CBT) curriculum for solar-powered irrigation systems (SPIS).
4	Date from - Date to	May-August 2020
	Project Location	Ghana
	Client	Vester Oil
	Position	Energy Auditor/Specialist
	Description	Energy auditing of industrial equipment (boiler, pumps, motors, heat exchangers, lighting systems, etc), and identification of energy efficiency opportunities.
5	Date from - Date to	July 2019
	Project Location	Nationwide (Volta Region, Eastern Region, Greater Accra Region, Central Region, Ashanti Region),
	Client	GIZ
	Position	Enumerator
	Description	
6	Date from - Date to	November 2018 - March 2019
	Project Location	Kumasi-Ghana
	Client	Energy Foundation/GIZ
	Position	Served as a trainee and assisted in data collection of power consumption of electrical appliances
	Description	Market study: The project gathered data on the power consumption of refrigerators/freezers in households and SMEs in the Ashanti region of Ghana to determine their energy consumption and energy efficiency and also advised on their effective utilization.
7	Date from - Date to	Sept – November 2017
	Project Location	Kumasi- Ghana
	Client	KNUST
	Position	Energy Auditor
	Description	Energy audit on the energy consumption of electrical appliances at the Halls of residence on KNUST Campus, Kumasi, and advised / educated students on the need for energy efficiency.
	Date from - Date to	October 2018

8	Locations	Kumasi- Ghana
	Client	Kwame Nkrumah University of Science and Technology
	Position	Energy Auditor
	Description	Energy audit and energy efficiency recommendations to reduce energy consumption and cost at the Faculties and other administrative offices/ buildings on KNUST campus, plus energy efficiency retrofitting recommendations for lighting systems
9	Date from - Date to	February 2017
	Locations	Tamale Ghana
	Client	Total Filling Stations
	Position	Energy Auditor
	Description	Energy audit and energy efficiency recommendations to reduce energy consumption and cost at some selected Total Filling Stations in Tamale, planning of solar PV installation for lighting system, Fuel pumps systems.
10	Date from - Date to	March 2016 – April 2017
	Locations	Ghana
	Client	Ghana Energy Commission
	Position	Technical staff
	Description	Conducted Pre-feasibility Studies on Solar Powered Irrigation Systems for Ghana Irrigation Development Authority (GIDA) Sites in the Northern Sector of Ghana. Project grant from Ghana Energy Commission under the UNDP China-Ghana south-south cooperation project on renewable energy technology transfer (RETT) to conduct scoping studies on sustainable solar irrigation systems to enhance agricultural production in Ghana. The findings of these scoping studies have been included in the Ghana Renewable Energy Master Plan (REMP) being adopted by the new Ghana Government.

## REFEREES

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