

BENNETH CHIMAOBI OYINNA

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<https://www.researchgate.net/profile/Benneth-Oyinna>

<https://uniport-computerscience.academia.edu/BennethOyinna>

PERSONAL STATEMENT

An energy development executive and Certified Energy Planning Engineer with over fifteen (15) years' experience leading research and project development initiatives across the Nigerian Power Industry. Passionate about driving sustainable, affordable, and scalable renewable energy solutions that address sub-Saharan Africa's growing power needs.

EDUCATION

Doctor of Philosophy – Mechanical Engineering (In view)

Aditya University, Surampalem, Andhra Pradesh, India

Jan. 2026

Masters of Science – Energy Access And Renewable Energy Technology

University of Port Harcourt, Nigeria

Oct, 2022-Nov. 2024

Bachelor's Degree in Engineering - Mechanical Engineering

Federal University of Technology, Owerri, Imo state, Nigeria

Dec. 2006 – Mar. 2012

WORK EXPERIENCE

Managing Director/CEO

Greenwave Nig Ltd

10B UAC Road, Ikot Abasi, akwa Ibom State

May 2026- till date

- Direct end-to-end development of renewable energy projects, from site identification and feasibility through financial close and construction
- Structure project financing (debt/equity/PPAs) and manage investor and board relations, driving strong financial performance across a multi-project portfolio
- Build and lead cross-functional teams while negotiating key stakeholder agreements (EPC, O&M, PPAs, land acquisition)
- Ensure regulatory compliance, risk management, and ESG commitments, safeguarding project delivery and company growth

Planning and Development Manager

Nigerian Electricity Supply Corporation (NESCO) Nig. Ltd

10 Barkin Ladi Road, Bukuru, Jos South, Plateau

November 2022 –April 2026

- GIS-based Asset mapping and Customer Enumeration of Network Feeders.
- Responsible for Renewable Energy Project Development, grid expansion, and Capacity upgrade using hybrid systems
- Designed on-grid Solar-PV-Small Hydro project to support NESCO's small hydro power generation at Kwi, Barkin-Ladi LGA Plateau State
- Conducted a Pre-feasibility study on the development and deployment of micro-hydroelectric and Wind power in Kwall and Kura Areas of Plateau State, Nigeria.
- Undertook a Comparative Cost Analysis and financial modelling of Network Expansion Project for Nigeria Electricity Supply Corporation's Generation and Distribution Infrastructure in Bukuru, Jos South, Plateau State
- Led a project team on Project feasibility and Community needs assessment of NESCO Power extension projects to Southern Plateau; Langtang North and South L.G.A

Business Development Manager- Renewable energy

- Supervised Sterling-Bank, Privida-Onyx Solar Building Integrated Photovoltaic (BIPV) installation in Sterling Bank Headquarters Marina, Lagos.
- Co-ordinated Community Engagement, Load Assessment, Generation and Distribution design, Financial Modeling for Off-grid projects towards 6.5MW Interconnected Mini-grids across Cross River and Akwa Ibom states
- Co-ordinated Design and procurement and ongoing construction of 50KWp Mini-grid project in Five Communities, Etung LGA Cross River State
- Led a team of Energy Auditors for Energy Audit at Akwa Ibom State University, conducted Technical Site surveys, and PV system design

Power Plant Engineer

Afam Power Plc

Okoloma, Oyigbo, Rivers State, Nigeria

June 2018-July 2019

- Monitored Gas turbine performance and operational parameters, ensuring optimal performance within thresholds
- Logged periodic performance data such as bearing temperatures, gas/Air pressures, MW and MVAR on time sheets and on the NCC portal and other maintenance software
- Carried out routine inspections on emergency diesel generator for Blackstart at Afam IV,
- Carried out Preventive and breakdown maintenance on GT17/18 Lub/hydraulic oil systems, changed filters, separators and monitored the alerts for service in conjunction with system operators
- Worked in a team that overhauled GT17/18 Donaldson filtration systems and changed the filter elements
- Conducted routine checks on valves, fuel systems for leaks, pumps and auxiliary and station service compressors ensuring plant availability and reliability

Service engineer

DitoWatt Energy Solutions Ltd, Port Harcourt

March, 2015-April 2018

- Managed industrial customers energy systems, ensuring efficiency and Access, reducing downtime by 70%
- Supervised the installation of Energy Management Software and Hardware (Power Distribution Modules) for effective energy usage monitoring and evaluation
- Designed and installed Power factor improvement systems
- Installed and maintained Backup generators, Switchgears and solar Home systems

TRAINING

- African Group of Negotiators Experts Support (**AGNES**) - Climate Leadership Program XVIII 2025
- MIT IAP 2025 - AI for Energy Solutions
- American Academy of Project Managers - Certified Planning Engineer's course
- ICTP-Joint Summer School of Sustainable Modelling- Financial Modelling of Power Sector projects
- Power Africa-Nigeria Power Sector Program - Off-Grid Energy Financial Modelling
- 22nd Micro-Grid Academy-RES4Africa - DRE systems design and Financial Modeling
- 21st MicroGrid Academy - DRE Systems/Community needs assessment 2022
- ONYX Solar - BIPV Installation Course-2021
- Huawei FussionSolar/Jubaili Bros Solar - Solar Installer Certification Program, 2021
- Energy Talent Company - Solar PV systems Specialist Training program-2021
- British Safety council - Health Safety and Environment Certification Level 1, 2, 3
- Abuja Graduate School - Leadership and Management training/NAPTIN NGSDP-2019
- National Power Training Institute of Nigeria (NAPTIN)-Power Generation –Mechanical-2018-2019

PROFESSIONAL MEMBERSHIP

- Council for the Regulation of Engineering in Nigeria(COREN) - Registered Engineer (63348)
- American Academy of Project Management - Fellow
- Nigerian Society of Engineers (NSE) - Member (55355)
- Institute of Engineering and Technology UK (IET) - Member (1100947025)
- Occupational Safety and Health Association - Member

TECHNICAL SKILLS

- Geospatial analysis (Google Earth, ArcGIS, QGIS)
- Energy projects Planning and Projects Management
- Data Analysis (Python)
- Solar PV systems design-Mini-grids(Load Assessment, Site survey, Sizing, Selection and Installation)
- Energy systems modelling and economic analysis
- Community needs assessment

JOURNAL PUBLICATIONS

1. **Modeling and predicting industrial carbon emissions in Nigeria using machine learning;** ACADEMIA ENVIRONMENTAL SCIENCES AND SUSTAINABILITY 2026, 3, <https://doi.org/10.20935/AcadEnvSci8134>
2. **Geographical Information System (GIS) study of energy potential in the Federal Capital Territory (FCT), Nigeria.** *Academia Green Energy*, 2(4). <https://doi.org/10.20935/AcadEnergy8066>
3. **Suitability and Socio-Economic Analysis of Hybrid Renewable Energy Systems Deployment in Rural Areas of Abuja, Nigeria,** *International Journal of Innovative Science and Research Technology* Volume 10, Issue 5, May – 2025, ISSN No:-2456-2165 <https://doi.org/10.38124/ijisrt/25may2218>
4. **Economic Analysis of Off-grid Energy Projects: A FINPLAN Model Approach** IEEE Access, 2025 | Journal article, DOI: 10.1109/ACCESS.2025.3561631
5. **Enhancing Cyber Attack Detection in Microgrids for Resilient Energy Networks,** *Journal of Modern Technology* 2024-11-25, available at <https://review.journal-of-modern-technology.com/index.php/jmt/article/view/10>
6. **MPPT For Hybrid Energy System Using Machine Learning Techniques,** *Journal of Modern Technology* 2024-08; available at <https://review.journal-of-modern-technology.com/index.php/jmt/article/view/6>
7. **SMS based reservoir condition monitoring sensor system for pumped hydro storage in mini-grids,** *Elsevier Measurement: Sensors*, Volume 33, June 2024, 101242 <https://doi.org/10.1016/j.measen.2024.101242>
8. **Multicriteria GIS-based assessment of biomass energy and hydropower potentials in Nigeria,** *Measurement: Sensors* 33 (2024) 101243, <https://doi.org/10.1016/j.measen.2024.101243>
9. **Geographical Information System based Assessment of various Renewable Energy Potentials in Nigeria:** *Energy Reports*, <https://doi.org/10.1016/j.egy.2023.12.065>
10. **Geo-spatial Assessment of small hydro potential in Abia state, South-Eastern Nigeria,** *INTERNATIONAL JOURNAL of SMART GRID* Vol.7, No.4, December, 2023, <https://doi.org/10.20508/ijsmartgrid.v7i4.316.g306>
11. **Geographical Information System Based assessment of small hydropower potential in South-Eastern Nigeria; A case study of Abia state.** *Proceedings of Africa International Conference on clean Energy and Energy Storage (AICCEES), 2023.* *Advances in Science and Technology* ISSN: 1662-0356, Vol. 142, pp 43-54
12. **Assessing small hydropower sites in Nigeria for sustainable development using ArcGIS,** *Energy Reports*, 10(July), 2889–2898. <https://doi.org/10.1016/j.egy.2023.09.102>
13. **Corrosion Inhibition of Stainless Steel Using Plant Extract Vernonia amygdalina and Azadirachta indica,** *Pacific Journal of Science and Technology* · Nov 1, 2013 https://www.akamai.university/files/theme/AkamaiJournal/PJST14_2_31.pdf

CONFERENCE PAPERS

1. **Alternative Energy Storage System for Low-income Coastal Off-grid Communities in Africa** Presented at the 2nd International Conference on Sustainable Power and Energy Research (ICSPER 2025)
2. **Integrated Electricity Resource Mapping for operational efficiency in mini-grids** Presented at the 5th International Conference on Mobile Radio Communications & 5G Networks, (MRCN-2024), UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY KURUKSHETRA UNIVERSITY, KURUSHETRA, HARYANA, INDIA
3. **Improving the affordability of mini-grid solutions in sub-Saharan Africa,** Presented at IX Annual conference on Energy Communities and Mini Grids - 15th December 2023
4. **Geographical Information System Based assessment of small hydropower potential in South-Eastern Nigeria; A case study of Abia state,** Presented at Africa International Conference of Clean Energy and Storage. *Advances in Science and Technology* ISSN: 1662-0356, Vol. 142, pp 43-54
5. **Using ArcGIS for Optimal Location of Small Hydropower Sites in Nigeria for Sustainable Development** *Proceedings of International Conference for ICT (ICICT)-Zambia* 5 (1), 128-133, <https://ictjournal.icict.org.zm/index.php/icict/issue/view/14>