

# OYINNA BENNETH CHIMAOBI

10 Barkin Ladi Road, Bukuru, Jos South, Plateau state

+2348060516479, +2349025497920

[bennethoyinna@gmail.com](mailto:bennethoyinna@gmail.com), [benneth.oyinna@nesconigeria.com](mailto:benneth.oyinna@nesconigeria.com)

<https://www.linkedin.com/in/bennethoyinna-1b119545/>

Orcid ID: <https://orcid.org/0009-0006-4064-702X>

<https://scholar.google.com/citations?user=UV4Lid0AAAAJ&hl=en>

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

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

## PERSONAL STATEMENT

A Certified Energy Planning Engineer with over fifteen (15) years' experience in the Installation, operations and maintenance of energy systems in the Nigerian Power Industry. A researcher with a keen interest in the sustainability and affordability of renewable energy projects in sub-Saharan Africa.

## BIO

Nationality: Nigerian  
Date of Birth: 1st September, 1987  
Passport Number: A13336044

## EDUCATION

### MASTERS OF SCIENCE – ENERGY ACCESS AND RENEWABLE ENERGY TECHNOLOGY

University of Port Harcourt

Oct, 2022-Nov. 2024

### Bachelor's Degree in Engineering - Mechanical Engineering

Federal University of Technology

Dec. 2006 – Mar. 2012

Owerri, Imo State, Nigeria

## WORK EXPERIENCE

### *Planning Engineer*

Nigerian Electricity Supply Corporation (NESCO) Nig. Ltd

10 Barkin Ladi Road, Bukuru, Jos South, Plateau

November 2022 –Till date

- GIS-based Asset mapping and Customer Enumeration of Network Feeders.
- Responsible for Renewable Energy Project Development, grid expansion, and Capacity upgrade using hybrid systems
- Conducted a feasibility study and design of 1MW on-grid Solar Project in Kwi Community Barkin ladi LGA of Plateau State, Nigeria.
- Undertook a Comparative Cost Analysis and financial modelling of Network Expansion Project for Nigerian 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 solar mini-grid projects to Southern Plateau; Langtang North and South L.G.A

### *Chief Technology Officer - Contract*

Integrated Africa Power

Königswinterer str. 382, 53227 Bonn

December 2022 -till date

- Energy projects planning and system modelling
- currently developing a 2MW Interconnected solar Mini-grid at Ugwuoba, Oji River LGA, Enugu State

### *Business Development Manager- Renewable energy*

Metikon Engineering Limited

73 Obio Imo Street, Uyo Akwa Ibom State

August 2021-October 2022

- Supervised Sterling-Bank, Privida-Onyx Solar1MW 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 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

### ***Project Engineer***

Greenwave Nig Ltd

21 Hospital Road, Ikot Abasi, akwa Ibom State

February 2020- August 2021

- Co-ordinated clients' energy systems installation
- Carried out energy Audit on facilities to determine best energy management and cost saving strategies
- Presented reports to the Facility manager periodically.
- Designed and inspected the construction and maintained of Solar Mini-grid in Egbeke, Etche, Rivers State

### ***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
- 22<sup>nd</sup> Micro-Grid Academy-RES4Africa - DRE systems design and Financial Modeling
- 21<sup>st</sup> 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

- Corporate Member 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
- Energy projects Planning and Projects Management
- Data Analysis
- 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. **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>
2. **Economic Analysis of Off-grid Energy Projects: A FINPLAN Model Approach** IEEE Access, 2025 | Journal article, DOI: 10.1109/ACCESS.2025.3561631
3. **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>
4. **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>
5. **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>
6. **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>
7. **Geographical Information System based Assessment of various Renewable Energy Potentials in Nigeria: Energy Reports**, <https://doi.org/10.1016/j.egy.2023.12.065>
8. **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>
9. **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
10. **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>
11. **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](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>