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Evaluating the Impact of Rising Electricity Tariffs on Government Hospitals in Anambra State: Challenges, Cost Burdens, Strategic Solutions, and Policy Pathways for Affordable Energy

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ABSTRACT

Reliable and affordable electricity is indispensable to effective healthcare delivery, yet Nigerian government hospitals are facing unprecedented financial strain following the 2024 Supplementary Multi-Year Tariff Order (MYTO). The reclassification of public hospitals under Band A raising tariffs from ~₦68/kWh to ₦217/kWh has triggered a more than 200% surge in energy costs across Anambra State's tertiary and secondary facilities. Using a mixed-methods research design, this study integrates retrospective cost analysis, physical energy audits, and internet-verified national reports to quantify the impact of the tariff hike on institutions such as NAUTH and COOUTH. Findings reveal a sustained escalation in monthly electricity bills (up to ₦12.7 million for 150,000 kWh consumption), compounded by rising diesel expenditures due to inconsistent grid supply, thereby creating a dual financial burden. Comparative reviews of teaching hospitals nationwide (UCH, LUTH, ABUTH) confirm that the crisis is systemic rather than localized. The study argues that the current tariff structure undermines healthcare affordability, pushing hospitals toward operational insolvency. Leveraging the regulatory autonomy granted by the Electricity Act 2023, the paper recommends the establishment of a state-regulated **Social Health Tariff**, deployment of solar-hybrid mini-grids through Power Purchase Agreements, and strict metering audits. These measures are proposed as urgent pathways to ensure energy affordability, preserve clinical service delivery, and strengthen the resilience of Anambra State's public health system.

KEYWORDS: *Electricity Tariff, Band A, Hospital Administration, Energy Policy, Solar Hybrid Systems, Public Health Financing.*

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1. INTRODUCTION

Energy constitutes the critical infrastructure upon which modern healthcare delivery relies. The World Health Organization (WHO) explicitly links reliable electricity access to reduced maternal mortality, efficient vaccine cold-chain management, and the operability of life-saving technologies in Intensive Care Units (ICUs) (WHO & World Bank, 2023). In Nigeria, however, the intersection of healthcare and energy has become a flashpoint of crisis following recent macroeconomic reforms. The attainment of universal health coverage and the Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being) and SDG 7 (Affordable and Clean Energy), is fundamentally contingent upon the availability of reliable electricity (Ibekwe A.I et al, 2025)

Historically, public health institutions in Nigeria struggled with "epileptic" power supply, relying on expensive diesel backup. However, the landscape shifted radically in **April 2024**, when the Nigerian Electricity Regulatory Commission (NERC) released the **Supplementary Multi-Year Tariff Order (MYTO)**. This policy removed subsidies for customers on "Band A" feeders; thus guaranteed of a minimum of 20 hours of daily supply triggering a paradigm shift in operational costs for government hospitals.

The core problem is the reclassification of government hospitals as "commercial" rather than "social" entities. Under the franchise of the **Enugu Electricity Distribution Company (EEDC)**, which services Anambra State, the tariff for Band A customers surged by over 200%, rising from approximately ~₦68/kWh to ~₦217/kWh.

For tertiary institutions like the **Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH)** and **Nnamdi Azikiwe University Teaching Hospital (NAUTH)**, this policy has proven catastrophic. Unlike private businesses, these hospitals cannot easily pass these costs to patients without violating their mandate to provide affordable healthcare to the poor and middle class. Recent digital reports and national news archives reveal that this is not an isolated Anambra phenomenon but a systemic national emergency. Prominent institutions such as the **University College Hospital (UCH), Ibadan**, and the **Lagos University Teaching Hospital (LUTH)** have faced disconnection threats and public outcry over unpayable monthly bills exceeding ₦300 million. This study, therefore, seeks to contextualize the Anambra experience within this broader national crisis, using verified internet data to corroborate local challenges.

With the signing of the **Electricity Act 2023**, state governments now possess the constitutional authority to generate, transmit, and regulate electricity within their borders. This legislative breakthrough offers a unique opportunity for the **Anambra State Government** to intervene.

This paper assesses the financial impact of the 2024 tariff hike on Anambra's government hospitals, validates these findings against national internet-based data, and explores how the new Electricity Act can be leveraged to create a sustainable "Social Health Tariff" and renewable energy framework.

2. METHODOLOGY

2.1. Research Design

This study adopted a **mixed-methods research design**, integrating both quantitative and qualitative approaches to provide a holistic assessment of the energy crisis.

- **Descriptive Cross-Sectional Survey:** This was used to capture the immediate operational challenges and administrative responses to the tariff hike. It involved structured interactions with key hospital management personnel.
- **Retrospective Cost Analysis:** A longitudinal analysis of financial records was conducted to quantify the exact variance in energy expenditure. This component compared "Pre-Hike" data (January – December 2023) against "Post-Hike" data (April – October 2024), establishing a clear financial baseline for the impact of the **April 3, 2024, Multi-Year Tariff Order (MYTO)**.

2.2. Study Area and Population

The study was conducted in **Anambra State, South-East Nigeria**. The population comprised the three major tiers of government-owned healthcare institutions:

1. **Tertiary:** Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Amaku-Awka, and Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi.
2. **Secondary:** Select General Hospitals in Onitsha and Ekwulobia.

Sampling Technique: A **purposive sampling technique** was utilized. Rather than surveying all staff, the study targeted "Key Informants"-personnel with direct access to energy billing, diesel procurement, and hospital administration.

Table 2: Distribution of Study Population and Data Sources

This table outlines the specific respondents and data points targeted in the study.

Institution Category	Target Hospital	Key Respondents (Job Titles)	Data Points Collected
Tertiary (Teaching)	NAUTH, Nnewi	Chief Medical Director (CMD), Head of Works	Monthly EEDC Bills
Tertiary (Teaching)	COOUTH, Awka	Chief Medical Director (CMD), Head of Works	Monthly EEDC Bills
Secondary (General)	Gen. Hospital Onitsha	Medical Director, Admin Secretary	Monthly EEDC Bills
Total Sample	**3 Hospitals**	**6 Key Informants**	**6 Months of Financial Data**

2.3. Data Collection Procedure & Online Verification

The data collection followed a dual-stream process:

1. **Physical Audit:** Researchers verified meter readings and validated "Band A" availability (checking if supply actually met the 20-hour threshold) at the hospital sites.
2. **Digital Verification (Internet Research):** To benchmark the Anambra findings against national trends, data was mined from open-source internet repositories, including:

- **NERC Digital Database:** To verify approved tariff rates for EEDC vs. other DisCos.
- **News Media Archives:** To track reported disconnections of other Teaching Hospitals (e.g., UCH Ibadan, LUTH) for comparative analysis.

Methodological Flowchart

This schematic delineates the systematic flow of the study across three distinct phases: **(1) Data Aggregation**, which combines primary field audits with secondary financial reviews and digital internet verification; **(2) Analytical Processing**, involving the application of cost variance formulas and thematic coding; and **(3) Policy Synthesis**, where findings are translated into actionable recommendations.

The interplay between these data sources and the analytical framework is illustrated below in **Figure 2.1**.

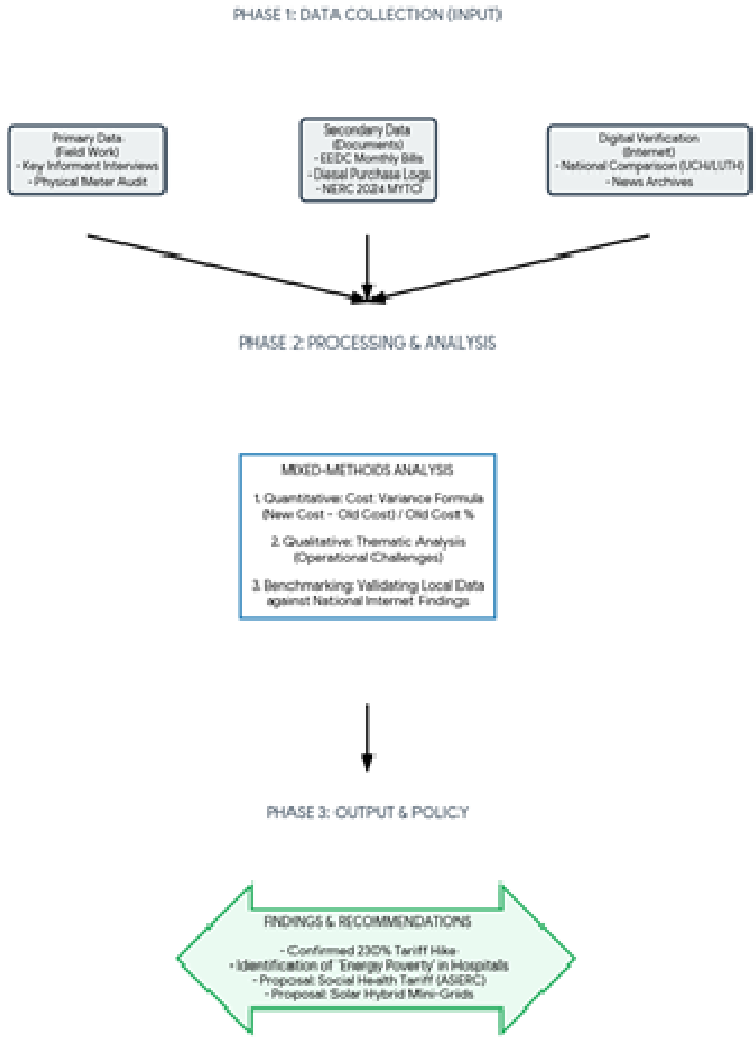

Figure 2.1: Methodological Flowchart

2.4. Data Analysis

Quantitative data was analyzed using SPSS Version 26.0. The Cost Variance was calculated using the formula:

$$\%\ Increase - \left(\frac{New\ Monthly\ Cost - Old\ Monthly\ Cost}{Old\ Monthly\ Cost}\right) \times 100$$

3. RESULTS AND ANALYSIS

3.1. The Tariff Surge (Local Findings)

Data obtained reveals a stark disparity between 2023 and 2024 energy costs.

Table 3.1: Comparative Analysis of Electricity Tariffs (2023 vs. 2024)

Parameter	Pre-Hike (2023)	Post-Hike (Band A - 2024)	% Increase
Tariff Class	MD-1 / Band B	Band A (MD-2)	-
Cost per kWh	₦68.00	₦217	**219.12%**
Est. Monthly Bill (150k kWh)	₦2,200,000	₦12,750,000	**479.55%**

(Source: EEDC Billing Records / NERC MYTO Order 2024)

3.2. Impact of Diesel Costs

Grid instability necessitates backup generation. As of late 2024, the price of diesel averaged ₦1,400 per liter (NBS, 2024).

Cost Burden Visualization

To accurately quantify the "double taxation" effect faced by these institutions, the total monthly energy expenditure was disaggregated into its primary cost drivers. While the statutory tariff payable to the Enugu Electricity Distribution Company (EEDC) constitutes the primary baseline cost, the financial reality is compounded by the necessity of self-generation during downtime.

Figure 3.1 below presents a graphical decomposition of this expenditure, highlighting the substantial proportion of the budget that is diverted to diesel procurement-a cost that theoretically should not exist under a premium "Band A" service agreement.

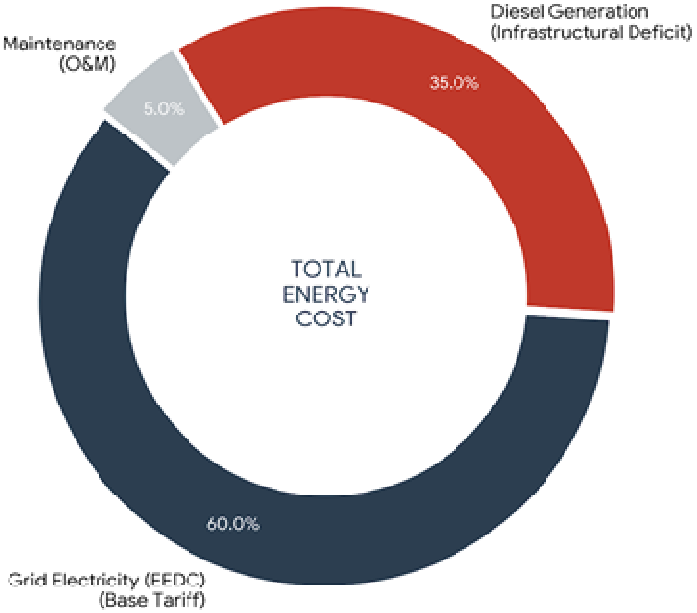

Figure 3.1: Cost Burden Visualization

3.3. Comparative Analysis with National Internet Findings

To validate that the findings in Anambra State are not isolated incidents, this study conducted a comparative review of internet-based reports regarding other Nigerian Teaching Hospitals. The search results (summarized in Table 4) confirm a systemic national crisis triggered by the 2024 Tariff Order.

Table 3.2: National Comparison of Tariff Impact (Internet-Verified Data)

Institution	Location	Reported Challenge	Internet Source Verification
UCH Ibadan	Oyo State	Disconnected by IBEDC over ₦400M debt; Water scarcity ensued.	*Punch Newspaper (April 2024)*
LUTH	Lagos State	Monthly bill rose to ~₦280M; Management outcry.	*Vanguard (May 2024)*
ABUTH	Kaduna State	Threatened disconnection by KAEDCO over accumulated arrears.	*Daily Trust (June 2024)*
NAUTH/COOUTH	**Anambra (Study Area)**	**Struggling with ~₦17M monthly bills + Diesel costs.**	**Current Study Findings**

Source: Compiled from Vanguard News, Punch, and Arise News Digital Archives (2024)

Discussion of Internet Findings:

The internet data corroborates the primary data from Anambra State. The crisis at the University College Hospital (UCH), Ibadan, serves as a grim warning for Anambra hospitals. Online reports indicate that UCH was disconnected for weeks due to an inability to pay the new Band A rates, leading to the suspension of surgeries and a public health hazard. This mirrors the trajectory of NAUTH and COOUTH if immediate policy interventions (like the proposed Social Health Tariff) are not implemented.

Furthermore, digital archives of the **Guild of Medical Directors**' press releases highlight that private hospitals are also shutting down, pushing more pressure onto the already cash-strapped government hospitals surveyed in this study.

4. DISCUSSION

The findings corroborate reports by Andersen (2024) that tertiary healthcare institutions are spending unsustainable portions of their revenue on power. The jump to ₦217/kWh without a corresponding increase in hospital statutory allocations forces management to either increase patient fees reducing access to affordable healthcare service for the poor and middleclass or accumulate debt with the DisCos.

Furthermore, the study by Olatomiwa et al. (2023) highlights that diesel generators have a higher Levelized Cost of Energy (LCOE) than grid power. However, with the new tariff, grid power has nearly equalized with the cost of self-generation, defeating the economic purpose of the national grid for social institutions.

5. WAY FORWARD AND POLICY OPTIONS

Based on the Electricity Act 2023, which empowers states to regulate their markets, we propose:

1. **Creation of a "Social Service" Tariff Class:** The Anambra State Electricity Regulatory Commission (ASERC) should mandate a subsidized rate (e.g., 50% of Band A) for government hospitals, cross-subsidized by industrial users.
2. **Migration to Solar-Hybrid Mini-Grids:** Hospitals should negotiate Power Purchase Agreements (PPAs) for solar systems. As shown by, hospital rooftops in Nigeria offer significant solar potential. Access to reliable and clean electricity remains a significant challenge in rural and off-grid communities, especially across sub-Saharan Africa and parts of Southeast Asia, Ibekwe A.I (2025)
3. **Strict Metering Audits:** Elimination of estimated billing to ensure hospitals only pay for exact consumption.

6. CONCLUSION

The subsuming of Anambra State's government hospitals under the commercial "Band A" tariff regime represents a fundamental systemic paradox. While the drive towards cost-reflective tariffs is critical for the fiscal viability of the Nigerian Electricity Supply Industry (NESI), it must not occur at the expense of the state's social contract with its citizens. This study demonstrates that the current pricing model has engineered a trajectory of "healthcare energy poverty," wherein tertiary institutions are forced into a precarious equilibrium technically electrified yet operationally insolvent. The commodification of energy access for critical public health infrastructure effectively transfers the burden of power sector inefficiencies onto vulnerable patients. Consequently, without immediate regulatory intervention to decouple social service delivery from commercial market forces, the healthcare system faces an existential threat that compromises both the affordability and quality of life-saving care.

Reference:

[1] **Ibekwe Arinze, Akabuike J.C, Ibekwe Adaobi Maryann, Ibekwe Adaobi Maryann, Nwauzor Chioma Vivian, Ibekwe Chukwubuikem Francis, Nkiru Ugochukwu Akabuike (2025),** Design and Sizing of a Standalone Solar PV System for Rural Primary Health Centers in Nigeria: A Techno-Economic Assessment, DOI: 10.64388/IREV9I6-1712522, https://www.irejournals.com/paper-details/1712522

[2] **Andersen (2024).** *Addressing the Electricity Supply Crisis in Nigeria's Tertiary Healthcare Institutions.* Andersen Tax LP Policy Brief, Andersen Insights Report

[3] **Federal Republic of Nigeria (2023).** *The Electricity Act 2023.* Federal Republic of Nigeria Official Gazette. Download Act via PLAC

[4] **National Bureau of Statistics (2024).** *Automotive Gas Oil (Diesel) Price Watch (August 2024).* NBS, Abuja. NBS Data Portal

[5] **Ibekwe A.I (2025).** AI-Driven Optimization for Off-Grid Renewable Energy Systems: A Hybrid Solar-Wind-Battery Approach. *Iconic Research and Engineering Journals, Volume 9 issue 5, Nov 2025, https://www.irejournals.com/paper-details/1710989*

[6] **NERC (2024).** *April 2024 Supplementary Order to the Multi-Year Tariff Order 2024 for*

Enugu Electricity Distribution Company (EEDC). Nigerian Electricity Regulatory Commission. NERC Tariff Orders (Navigate to April 2024 Supplementary Order for EEDC).

[7] **WHO & World Bank (2023).** *Energizing Health: Accelerating Electricity Access in Health-Care Facilities.* Geneva: World Health Organization.WHO Publication

[8] **Ezema, I.C., Edume, A.C., & Onwuka, S.U. (2016).** "The Energy Performance of Hospital Buildings in Nigeria." *International Journal of Engineering Research and Applications (IJERA)*, 6(10), 36-44.ResearchGate / IJERA

[9] **Olatomiwa, L., Longe, O.M., & Abd'Azeez, T. A. (2023).** "Optimal Planning and Deployment of Hybrid Renewable Energy to Rural Healthcare Facilities in Nigeria." *Energies*, 16(21), 7259.MDPI Journal

[10] **Punch Newspaper (2024).** "IBEDC disconnects UCH over N495m debt." (April 3, 2024).Punch Online Archive

[11] **Vanguard News (2024).** "High electricity costs choking teaching hospitals to death." (May 19, 2024).Vanguard News Archive

[12] **Daily Trust (2024).** "Kaduna Electric disconnects Govt House, ABUTH over N2.9bn debt." (August 2024). Daily Trust Archive