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LEGAL ANALYSIS ON ELECTRICITY SUPPLY BANDING AND CONSUMER PROTECTION IN NIGERIA

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Abstract

The paper interrogates the Nigerian Electricity Regulatory Commission's (NERC) Service-Based Tariff (SBT) consumer banding framework, introduced in 2020 through the review of the Multi-Year Tariff Order and its impact on underserved consumers in Nigeria. Based on consumer and investor reflective tariff methodology, energy justice and regulatory governance theories, the paper contends that while consumer banding was a rational regulatory response to a structurally insolvent electricity sector, the design and implementation of the intervention have reproduced spatial inequalities, rewarded infrastructure-proximate consumers, and transferred the systemic failures of privatization onto economically disadvantaged electricity consumer households. This paper critically examines the extent to which electricity consumer categorization, otherwise known as banding, functions as a genuine consumer protection mechanism, while accounting for its concurrent design as a tool for revenue generation

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and profit maximization by distribution companies. Through comparative analysis with South Africa's Inclining Block Tariff (IBT) and India's multi-tier lifeline tariff architecture, the paper demonstrates that Supply-hour-based differentiation, as operationalized through electricity banding frameworks, constitutes a technically and normatively inferior pricing instrument that aids consumer exploitation when compared to demand-side subsidies anchored on verifiable consumption proxies. The paper proposes a reformed framework informed by energy justice principles, consumer protection objectives, and comparative best practice.

1. INTRODUCTION

Access to affordable and reliable electricity is now recognized as a foundational dimension of human development, embedded in Sustainable Development Goal seven (7).[1] In sub-Saharan Africa, where electricity access rates remain below fifty per cent in several states, the governance of tariff structures is not merely a technical exercise in futility; it is a profoundly political and distributive act.[2] Nigeria, Africa's most populous nation and largest economy, presents one of the most instructive and troubling illustrations of how tariff reforms targeted for fair pricing that should protect consumers and allow for revenue optimization can become a site of contested legitimacy, regulatory capture, and structural inequality.

[1] United Nations, 'Transforming Our World: The 2030 Agenda for Sustainable Development. Resolution' (2015) A/RES/70/1. *New York: United Nations General Assembly.*

[2] KN Gratwick and A Eberhard, 'Demise of the standard model for power sector reform and the emergence of hybrid power markets'.(2008) *Energy Policy*, 36(10), pp.3948–3960.

In November 2020, the Nigerian Electricity Regulatory Commission (NERC) introduced the Service-Based Tariff (SBT), commonly known as the electricity consumer banding tariff. Under this framework, electricity distribution network feeders were categorized into five service bands, Band A through Band E, corresponding to expected daily hours of electricity supply, with Band A consumers receiving a minimum of twenty hours per day, attracting the highest tariff rate, and Band E consumers receiving the least supply, paying the lowest rate.[3] In April 2024, Band A tariffs were increased to approximately N225 per kWh a figure representing the post-subsidy-removal cost-reflective rate compared to approximately N68 for Band E, a differential of over 230 per cent.[4] Band A consumers constitute approximately 15 per cent of Nigeria's roughly 12 million connected customers but account for approximately 40 per cent of total electricity consumed.[5]

The SBT's primary objective is to establish fair and efficient pricing system that balances the consumer protection principle of payment based on actual consumption with the imperative of revenue optimization for electricity distribution companies, particularly through incentivizing infrastructural improvements. However, such an objective in the context of prevailing socioeconomic realities has been faulted as an inaccurate pricing methodology that focuses on supply rather than consumption and also, conversely, perpetuates inequality among consumers whose

[3] NERC, 'Order No. NERC/2020/011: Service-Based Tariff (Partial Subsidy) Order'. (2020) Abuja: NERC
[4] NERC, NERC Tariff Order — Band A Cost-Reflective Tariff, April 2024. Abuja: NERC.
[5] NERC, Annual Report 2023: Metering, Customer and Tariff Data. Abuja: NERC.

accessibility to improved electricity supply is, by this framework, to be determined by their geographical location.

The SBT regime has attracted sharp criticisms from consumer rights organizations, civil society groups, and academic commentators, who argue that it constitutes an implicit discriminatory instrument. They contend that the instrument systematically benefits the wealthy and infrastructure-proximate communities while imposing disproportionate burdens on low-income consumers who lack the political voice or geographic mobility to contest their band assignment.[6] The federal government's partial subsidy through the Nigerian Bulk Electricity Trading Plc (NBET) has further complicated the picture, creating a bifurcated system in which some consumers are effectively cross-subsidized by public funds while others face near-commercial rates without commensurate service reliability.

This paper addresses a gap in the existing literature, which tends to either defend the SBT as a necessary cost-reflective reform[7] or to critique it in dismissive general normative terms without comparative rigor.[8] The paper argues that a more sophisticated and balanced assessment requires three analytical approaches: first, situating banding within energy justice theory for efficient consumer protection and the economics of regulated utilities; second, examining its empirical distributional consequences; and third,

[6] YO Akinwale, 'Electricity tariff reforms and consumer welfare in Nigeria: a political economy perspective.' (2021) *Journal of African Business*, 22(3), pp.345–362; NERC (2023b) Quarterly Report Q3 2023: Distribution Sector Performance. Abuja: NERC.
[7] World Bank, *Nigeria Economic Update: Bridging the Electricity Gap*. (2021 Washington, DC: World Bank).
[8] E Okafor, 'Electricity tariff reform, distributional equity, and the politics of consumer protection in Nigeria.' (2022) *Energy for Sustainable Development,* 71, pp.204–217

benchmarking it against comparable tariff differentiation mechanisms in South Africa and India, two middle-income jurisdictions that have grappled with analogous challenges under different regulatory architectures.

The paper proceeds as follows. Section 2 establishes the theoretical framework. Section 3 provides structural and historical context. Section 4 analyses the SBT architecture. Sections 5 through 7 offer critical and comparative analysis. Section 8 synthesizes the comparative lessons, and Section 9 concludes the paper.

2.0 CONCEPTUAL FRAMEWORK: CONSUMER PROTECTION, ENERGY JUSTICE, AND REGULATORY ECONOMICS

2.1 Consumer Protection

Consumer protection is the practice of safeguarding buyers of goods and services against unfair, deceptive, or dangerous business practices, and in this case Electricity Consumers. It ensures consumer rights—safety, information, choice, and redress—are protected and upheld while shifting market power from "caveat emptor" (buyer beware) to "caveat venditor" (seller beware). This involves effective regulatory governance, structural and legal remedies, education, and representation to promote fairness. This paper interrogates the underpinnings of consumer protection within the Nigerian Electricity Regulatory Commission's service-based tariff methodology, with particular emphasis on how consumer categorization operates at the intersection of regulatory protection and revenue optimization. Consumer protection should not be treated as a slogan embedded in tariff design, but as a set of enforceable principles—fair pricing, transparency, reliability of service, accountability, and access to

remedies—and then interrogate how far the service-based tariff (SBT) model actually gives effect to those principles. The framework reflects a dual regulatory objective. On one hand, it purports to protect consumers; on the other, it is explicitly designed to enhance cost recovery and financial viability of distribution companies (DisCos). This duality is not inherently problematic, but it becomes contentious where revenue considerations appear to dominate protective safeguards hence the purpose of this paper to interrogate the effectiveness of the tariff model.

2.2 Energy Justice

Energy justice is an interdisciplinary concept that applies principles of social justice to the production, distribution, and consumption of energy.[9] In its conceptual formulation, it encompasses three tenets: distributive justice, concerned with the fair allocation of energy benefits and burdens among consumers; procedural justice, focused on the inclusiveness and transparency of decision-making processes; and recognition justice, which demands that the interests and identities of marginalized communities be acknowledged in regulatory deliberation.[10] More recently, restorative and cosmopolitan justice dimensions have been added to the framework, broadening its analytical reach.[11]

Applied to tariff design, energy justice demands that differentiated pricing mechanisms be evaluated not merely on efficiency grounds but on their implications for distributional equity, access, and voice. A tariff structure

[9] BK Sovacool, and RJ Heffron, 'Energy justice: a prescriptive process.' (2014) *Applied Energy*, 123, pp.435–444

[10] K Jenkins, D McCauley, RJ Heffron, H Stephan, and R Rehner, 'Energy justice: a conceptual review.' (2016) *Energy Research and Social Science*, 11, pp.174–182.

[11] RJ Heffron and D McCauley, 'The concept of energy justice across the disciplines.' (2017) *Energy Policy*, 105, pp.658–667.

that is cost-reflective but whose cost signals fall most heavily on the poorest electricity consumer households fails the distributive justice test, regardless of its technical elegance. Nigeria's banding regime must be assessed through this lens.

2.3 Regulatory Governance: Cost-Reflective Tariffs and Ramsey Pricing

From a regulatory governance perspective, cost-differentiated tariffs are justified by the principle of cost-reflective pricing. This principle holds that electricity consumers should pay prices that reflect the actual cost of supplying power to them, including differences in location, network constraints, and time of consumption.[12] Where these marginal costs vary—due to factors such as network congestion, feeder limitations, and generation dispatch requirements—uniform tariffs can lead to inefficient consumption and weak investment signals. This is because they fail to reveal the true cost of supply and may encourage overuse in high-cost areas while discouraging investment in infrastructure.

Ramsey pricing theory further supports differentiated pricing in natural monopoly settings. It proposes that prices should be structured so that higher mark-ups are applied to consumers with more inelastic demand, while those with more elastic demand face lower mark-ups.[13] In practical terms, this often implies that lower-income households—who typically

[12] PL Joskow, 'Lessons learned from electricity market liberalization.' (2008) *Energy Journal, Special Issue,* pp.9–42.
[13] FP Ramsey, 'A contribution to the theory of taxation.' (1927) *Economic Journal*, 37(145), pp.47–61; JJ Laffont and J Tirole, 'The politics of government decision-making: a theory of regulatory capture.' (1991) *Quarterly Journal of Economics*, 106(4), pp.1089–1127.

have fewer alternatives and less flexibility in consumption—should bear lower relative mark-ups.

Taken together, these principles support a form of price differentiation in electricity tariffs. However, they do not justify the use of supply-hour-based banding as the basis for such differentiation. A key concern is whether hours of supply accurately reflect underlying cost differences, or whether they instead serve as a morally arbitrary classification that reflects infrastructure conditions rather than the actual cost of service delivery.

2.4 Regulatory Capture and Political Economy

It is pertinent that Stigler's foundational account of regulatory capture argues that regulation is frequently acquired by industries and shaped to serve their interests.[14] This position was refined by some critics to show that capture occurs through information asymmetries and incentive misalignments between regulators, operators, and consumers.[15] Nigeria's electricity sector, characterized by opaque cost data, weak consumer representation, and Distribution Companies that face limited competitive pressure, is particularly susceptible to this dynamic. The SBT's design, which allows Distribution Companies to define band boundaries without independent metered verification, is a textbook case of regulatory capture risk.

[14]GJ Stigler, 'The theory of economic regulation.' (1971) *Bell Journal of Economics and Management Science*, 2(1), pp.3–21.

[15] JJ Laffont and J Tirole, 'The politics of government decision-making: a theory of regulatory capture.' (1991), note 15.

3.0 HISTORICAL AND STRUCTURAL CONTEXT OF NIGERIA'S ELECTRICITY SECTOR

3.1 Pre-Privatization Regime to Post-Privatization Regime.

Nigeria's electricity sector operated as a vertically integrated state monopoly under the National Electric Power Authority (NEPA) and its successor, the Power Holding Company of Nigeria (PHCN), for over four decades. The sector was characterized by chronic underinvestment, pervasive subsidy through below-cost tariffs, and deteriorating infrastructure.[16] By 2013, installed generation capacity stood at approximately 12,500 MW, with only 3,500 to 4,000 MW available for supply at any given time due to transmission constraints and gas supply shortfalls.[17] Nigeria had fewer than 6,000 MW of functional generation capacity for a population then exceeding 170 million. A per-capita electricity supply among the lowest on the continent. This majorly accounts for the challenge of poor energy access for electricity consumers in Nigeria.

The Electric Power Sector Reform Act (EPSRA) of 2005 established the legal framework for unbundling and privatization, which culminated in the transfer of PHCN assets to eleven Distribution Companies (DisCos) and six Generation Companies (GenCos) in late 2013.[18] NERC concurrently introduced the Multi-Year Tariff Order (MYTO) framework,

[16] JO Dada, 'Towards understanding the challenges militating against the development of a sustainable energy mix in Nigeria.' (2014) *Renewable and Sustainable Energy Reviews*, 38, pp.640–647

[17] World Bank, *Nigeria: Electricity Sector Privatisation Program — Implementation Completion Report*. (2015 Washington, DC: World Bank.)

[18] Electric Power Sector Reform Act 2005.

a cost-of-service methodology designed to set tariffs that would attract investment and achieve sector financial sustainability over a five-year horizon.[19] In practice, however, successive administrations held tariffs below MYTO levels to contain political pressure. Verified estimates place the cumulative tariff shortfall for 2015–2019 at approximately N1,678 billion, with the Federal Government borrowing a further N1,301 billion between 2017 and 2020 to cover Generation Companies' payments.[20]

The consequences were predictable and severe. Distribution Companies were technically insolvent on a cost-reflective basis, unable to service acquisition debts, fund capital expenditure, or pay Generation Companies for power purchased. Generation Companies could not pay gas suppliers. The Nigerian Electricity Supply Industry (NESI) operated effectively as a subsidized quasi-state system in private hands, an arrangement that combined the worst features of both public and private provision.[21]

By 2019–2020, the sector's aggregate subsidy obligation had grown to structurally unsustainable levels. NERC in early 2024 reported that NBET was accumulating legacy debts to Generation Companies, which were projected to reach the equivalent of ₦1,949 billion in annual gross subsidy obligations, representing 62.59 per cent of total NBET invoices as of the end of 2024.[22] Against this backdrop, NERC and the federal government

[19] NERC (Nigerian Electricity Regulatory Commission), Multi-Year Tariff Order 2012 (MYTO-2). (2012) Abuja: NERC

[20] M Imran, and M Simonova, *Nigeria — Electricity Sector Recovery Program: Implementation Support Mission. Aide Memoire*. (2021,Washington, DC: World Bank).

[21] A Eberhard, K Gratwick, E Morella, and P Antmann, *Independent Power Projects in Sub-Saharan Africa: Lessons from Five Key Countries*. (2016, Washington, DC: World Bank Group).

[22] NERC Tariff Order — Band A Cost-Reflective Tariff, April 2024.

faced a structural dilemma: tariff increases were economically necessary but politically toxic in a context of high unemployment, inflation, and widespread distrust of Distribution Companies' performance. Banding emerged as a politically calculated instrument, a mechanism to raise effective tariffs on a subset of consumers (those in better-served areas) while deferring universal cost-reflective pricing and maintaining a subsidy shield for lower-band consumers.[23]

4.0 NERC'S SERVICE-BASED TARIFF: ARCHITECTURE AND RATIONALE

4.1 Band Classification Criteria

The SBT is an extraordinary MYTO review that took place in 2020, which classified consumers into five service bands based on the average daily hours of electricity supply delivered on the relevant distribution feeder, as reported by the Distribution Companies and reviewed by NERC every quarter. The classification criteria and verified tariff data are as follows:

Band	**Min. Hours/Day**	**Tariff Status**	**Tariff (N/kWh) April 2024**	**Est. % Customers (NERC 2023a)**
A	≥20	Cost-reflective (subsidy removed April 2024)	225	~15%
B	≥16	Near cost-reflective	175*	~10%
C	≥12	Partially subsidized	120*	~20%

[23] F Dafe, 'Regulatory institutions and the politics of electricity pricing in Nigeria.' (2023) *World Developmen*t, 165, article 106174.

D	≥8	Subsidized	90*	~25%
E	<8	Heavily subsidized	68*	~30%

Table 1: NERC Service Band Classification and Tariff Rates. Sources: NERC (2020); NERC (2023a); NERC (2024). * Bands B–E tariff figures are indicative pre-April 2024 rates; post-April 2024 adjustments for these bands require verification against the current NERC tariff order.

Band A consumers are largely concentrated in high-income residential estates, commercial and industrial districts, and diplomatic zones in Lagos, Abuja, and Port Harcourt areas, where Distribution Companies have historically prioritized infrastructure maintenance due to commercial concentration and the presence of industrial anchor customers.[24] Despite representing only 15 per cent of the customer base, their 40 per cent share of total consumption makes them disproportionately important to Distribution Companies' revenue recovery. Band E consumers, conversely, are disproportionately located in peri-urban and rural areas, where chronic metering gaps, network decay, and vandalism compound supply unreliability.

NERC's stated rationale for the SBT encompassed three distinct objectives. First, the framework aimed to improve revenue recovery by aligning tariffs with the quality of service actually delivered a principle broadly consistent with the 'customer receives what they pay for' logic of service differentiation.[25] Second, it sought to incentivize Distribution Companies' investment in network improvement. It was proposed that by enabling Distribution Companies to earn higher revenues on upgraded

[24] NERC Quarterly Report Q3 2023: Distribution Sector performance (2023b)
[25] NERC Order No. NERC/2020/011: Service-Based Tariff 2020 (Partial Subsidy) Order.

feeders, the SBT was intended to function as a performance-linked revenue mechanism. Third, it was designed to provide fiscal relief to the federal government by reducing the aggregate subsidy burden, concentrating continued subsidies on the lowest-consumption, lowest-service bands.[26]

4.2 The Metering Challenge

A structural critical flaw in the SBT design is its deployment against a backdrop of massive metering gaps. Since the major objective of the SBT framework is to drive revenue optimization for distribution companies through improved hour-based supply of electricity to consumers. This will likely result in severe consumer exploitation in the face of massive metering deficit in the Nigerian Electricity Supply Industry (NESI) as unmetered electricity consumers within the Band A areas risk paying exorbitantly within the context of unchecked billing parameters and same challenge is applicable to other consumers within lower band segments. Metering is that essential component of power management tool that accounts for power inflows and outflows within an electricity supply network (generation, transmission and distribution).[27]While grid metering has been largely successful, retail metering of consumers remains a challenge within NESI. As of 31 December 2023, NERC confirmed that only 5,842,726 customers representing 44.39 per cent of the 13,162,572 registered customers were metered, leaving approximately 7.3 million customers (55.61 per cent) subject to estimated billing.[28] The Meter Asset

[26] Federal Ministry of Finance, Budget and National Planning, *Medium-Term Expenditure Framework and Fiscal Strategy Paper 2022–2024*. (2021)
[27] Chidi Ike, An Article Presented as a Senior Technical Adviser, presidential Taskforce on power
[28] NERC, Annual Report 2023: Metering, Customer and Tariff Data. (2023a).

Provider (MAP) program introduced in 2019 has made progress but remains far short of sector needs.[29] Under estimated billing, DisCos retain substantial discretion in assigning consumption levels, creating rent-seeking opportunities that compound the distributional concerns associated with band classification. Sometime in April 2024, reports emerged that several distribution companies in Nigeria had imposed tariff charges designated for Band A consumers upon Bands B, C, D and E consumers. This occurred despite the fact that such customers did not receive the quality and duration of electricity supply required to justify the higher tariff classification.

The issue was particularly identified and raised by metered consumers who were able to monitor their electricity supply in relation to their meter recharge payments. This development further underscores the importance of closing existing metering gap within the Nigerian electricity sector. Following the consumer outcry, NERC ordered the distribution companies to refund the affected consumers with evidence of compliance.[30] In summary, the metering deficit weakens the link between service and payment, which is the core objective of SBT. The framework is designed to ensure that consumers pay tariffs that correspond to the number of hours of electricity supplied. Without functional meters, many consumers are placed on estimated billing, making it difficult to verify whether they are actually receiving the level of supply associated with their tariff band. Consumers without prepaid or smart meters lack transparency and control over their electricity usage and expenditure. This makes them more

[29] Rural Electrification Agency, *MAP Programme Progress Report: 2019–2023*. (2023).
[30] Dare Olawin, New electricity tariff: NERC asks Discos to refund overbilled customers, Punch Newspaper (Nigeria), 6th April 2024, assessed from https://punchng.com/new-electricity-tariff-nerc-asks-discos-to-refund-overbilled-customers/ on 12th May 2026.

vulnerable to exploitation, wrongful billing, and disputes with Distribution companies with limited ability to prove discrepancies. In light of the foregoing, the protective intent of SBT, which is to link payment to verifiable service, will appear to have been weakened significantly.

5.0 ANALYSING THE DISCRIMINATORY IMPACT AND REVENUE-DRIVEN OBJECTIVES OF SBT-BANDING

5.1 The Geography of Banding: Spatial Inequality as Structural Outcome

The most substantive critique of the SBT is that band assignment functions as a spatial proxy for income and social capital, reproducing and legitimizing existing inequalities rather than addressing them. Feeders that receive twenty or more hours of supply per day are, in the Nigerian context, almost invariably those serving commercial districts, high-income residential areas, and government institution zones in which Distribution Companies have commercial incentives to maintain reliable supply independent of regulatory pressure.[31]

This creates a paradox: the consumers who can most afford cost-reflective tariffs are those in Band A, and they do indeed pay higher rates. But the mechanism by which they arrived in Band A is not their income level per se; it is the geographic accident of proximity to maintained infrastructure. Equally, Band E consumers are not definitively poor. Some within that band include small businesses in degraded urban areas and middle-income households in poorly maintained districts of major cities. The proxy is

[31] YO Akinwale, 'Electricity tariff reforms and consumer welfare in Nigeria: a political economy perspective.' (2021) *Journal of African Business,* 22(3), pp.345–362.

crude, and its crudeness is very consequential. Leveraging on this speculative assumption, it is key that Band A geographic areas are perceived to be occupied by the wealthy while the band E are assumed to be occupied by the poor. Assuming without conceding this assumption to be true, this geographic socio-economic dimension creates a two-tier electricity system, where wealthier consumers can afford better services, while vulnerable populations are trapped in cycles of inadequate supply and limited economic opportunities. Rather than promoting universal access to consumers, SBT risks reinforcing existing inequalities, negatively affecting underserved electricity consumers.

Another key defect of the SBT is to the effect that the investment incentive logic embedded in the SBT contains a fundamental perverse mechanism. DisCos can increase revenue by reclassifying feeders upward from Band C to Band B, for instance, if supply hours improve. But the threshold for improvement is self-reported by DisCos, audited by NERC with limited technical capacity, and vulnerable to manipulation. NERC's own quarterly reports have documented discrepancies between declared supply hours and consumer-reported outage frequencies in several DisCo franchise areas.[32] Furthermore, the SBT provides no penalty mechanism for sustained under-delivery within a declared band. A Band A consumer receiving only fifteen hours per day instead of the guaranteed twenty has formal complaint rights under NERC Order No. NERC/2020/011, but, in practice, enforcement is severely limited by NERC's institutional capacity constraints and DisCos' litigation leverage.[33]

[32] NERC, Quarterly Report Q3 2023: Distribution Sector Performance. (2023b)
[33] F Dafe, 'Regulatory institutions and the politics of electricity pricing in Nigeria.' Note 25.

5.2 Revenue Objectives and the Subsidy Architecture

The revenue objective of the SBT is not in itself illegitimate; a financially viable electricity sector is a precondition for any distributional objective. The problem lies in the distributional incidence of the revenue-raising instrument. By targeting revenue recovery through a supply-hour proxy, the SBT effectively extracts higher rents from consumers in areas where prior public and private investment has already delivered infrastructure advantages, while exempting those areas with defective distribution infrastructure from the full discipline of cost-reflective pricing and service-based pricing. This in converse effect creates basically no incentive for Discos to improve on infrastructure within these lower band areas with tariff cap. The weakness perceived with this framework lies in the incomplete transition to cost-reflective tariffs. While the SBT seeks to recover more revenue from consumers, particularly those in higher service bands, the broader tariff structure remains politically constrained. Government continues to cap tariffs of certain categories of consumers thereby creating a tariff shortfall that must be financed through subsidies. This undermines the core premise of SBT, as the market is neither fully cost-reflective not fully subsidized, but caught in the unstable hybrid system.

The parallel subsidy channel through which NBET continues to provide below-market capacity payments to GenCos not reflected in Band E tariffs, amounts to a public subsidy to DisCos rather than a targeted subsidy to poor consumers. In 2024, this subsidy obligation stood at N1,949 billion, representing 62.59 per cent of total NBET invoices.[34] This data is a reflection of the challenges occasioned by the opaque subsidy

[34] NERC Tariff Order — Band A Cost-Reflective Tariff, April 2024.

funding which in reality creates an architecture of accumulated market debts, as subsidy payment in reality are often delayed, underfunded, and sometimes not transparently administered.

5.3 Consumer Rights, Constitutional and Human Rights Challenges

Banding from a theoretical perspective may be said to have been designed for consumer protection of poor consumers but in practice raises a plethora of consumer rights issues. The first of the issues is the denial of electricity access to certain classes of consumers whose geographic incidence places them within a feeder categorization with poor electricity supply services. The challenge of these classes of consumers is further compounded by the economic principle of incentive-compatible pricing and premium service tiers which make Discos allocate their highest quality, fastest, or most abundant resources to Band A customers who pay the most. This invariably leaves the Band D-E underserved consumers with little or no access to electricity. it is also imperative that the SBT framework is based on a supply-parameters rather than a demand-parameters which makes the availability of a measurement metric like smart prepaid meters as a precondition for its proper implementation. Nigeria with a metering gap of about 59.73%, leaves unmetered electricity consumers at the mercy of distribution companies who leveraging on the SBT framework will likely exploit consumers within the Band A category. Same is also applicable with even the lower bands who with the system end up paying for a non-existent service.

From a legal and constitutional perspective, the SBT vide its implementation, raises important constitutional questions, particularly in relation to the right to equality and the protection of consumers. The idea of creating a two-tier electricity community of the rich on one end and the

poor on the other end raises concerns under Section 17 of the Nigerian Constitution (1999 as amended), which directs state policy towards ensuring equal and adequate social infrastructure for all citizens, and under the broader framework of economic and social rights embedded in Chapter II. While Chapter II rights are non-justiciable in Nigeria's domestic courts[35] They represent a legitimate normative benchmark for regulatory design.[36]

It is imperative to note that Section 42 of the Constitution of the Federal Republic of Nigeria 1999 guarantees freedom from discrimination, prohibiting differential treatment of citizens on unjustifiable grounds. While SBT does not expressly discriminate on traditional grounds such as ethnicity, religion, or gender, its practical operation creates indirect and structural inequality among electricity consumers. By segmenting consumers into tariff bands based on location and feeder performance, the framework produces unequal pricing outcomes for consumers who may be similarly situated in all material respects except geography. This raises concerns of substantive inequality, where the law appears neutral but produces unequal effects.

Furthermore, the SBT regime challenges the constitutional principle of fair administrative action, which is implicit in Nigeria's legal order and reflected in regulatory obligations of transparency, accountability, and reasonableness. Consumers placed in higher tariff bands are expected to receive guaranteed hours of supply; however, in practice, these service

[35] Attorney-General of Ondo State v. Attorney-General of the Federation [2002] 9 NWLR Pt 772),

[36] C Nwosu, 'Justiciability of socio-economic rights and electricity access in Nigeria: a constitutional analysis.' (2020) *African Journal of International and Comparative Law*, 28(1), pp.42–68.

levels are often not consistently delivered. The continued imposition of higher tariffs in the absence of corresponding service quality may be viewed as arbitrary and unreasonable, thereby undermining the legitimacy of the regulatory framework.

Also, the African Charter on Human and Peoples' Rights, domesticated through the African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act (Cap A9, LFN 2004), provides a stronger justiciable basis for challenging discriminatory access to essential services.

6. COMPARATIVE ANALYSIS I — SOUTH AFRICA'S INCLINING BLOCK TARIFF

6.1 Sector Structure and Regulatory Architecture

South Africa's electricity sector presents a contrast with Nigeria in several structural respects. South Africa does not operate a tariff system equivalent to Nigeria's SBT model; instead, electricity pricing in South Africa is regulated by the National Energy Regulator of South Africa (NERSA) under a framework that is fundamentally different in structure and intent.

Eskom, the state-owned vertically integrated utility, retains dominant control of generation and transmission, with municipalities accounting for approximately forty per cent of retail distribution.[37] The National Energy Regulator of South Africa (NERSA) exercises tariff jurisdiction over Eskom, while municipal tariffs are subject to both NERSA guidelines and National Treasury oversight. This dual regulatory architecture creates

[37] NERSA (National Energy Regulator of South Africa) Regulatory Clearing Account (RCA) Decision: Eskom 2021/22. (2022).

complexity but also redundancy that has, in practice, provided stronger consumer protections than Nigeria's single-regulator model. Unlike the Nigeria's SBT model which links tariff to guaranteed hours of supply, NERSA uses the Multi-Year Price Determination methodology which allows utilities like Eskom to recover efficient costs over a regulated period based on certain indexes which will be discussed below.

6.2 The Free Basic Electricity Program and IBT Design

South Africa's tariff differentiation model rests on two pillars. First, the Free Basic Electricity (FBE) program, introduced in 2003, provides fifty kWh of electricity per month at zero cost to qualifying indigent consumer households, estimated to cover the majority of the country's poorest consumers.[38] Second, Eskom's Inclining Block Tariff (IBT) structure charges progressively higher rates per kWh as monthly consumption increases, with lower-block consumers paying substantially below cost-reflective rates.[39]

The IBT is designed on the premise supported by extensive household survey data that lower-consumption households are disproportionately low-income, and that a consumption-based block structure therefore approximates a means-tested subsidy without requiring direct income assessment.[40] This is the critical design advantage of the South African model relative to Nigeria's SBT framework, as it uses consumption quantity as a demand-side proxy that is metered and verifiable, rather than

[38] Department of Energy, Republic of South Africa, *Free Basic Electricity Policy Review*. (2019, Pretoria: Department of Energy).
[39] Eskom, *Eskom Integrated Report 2022/23.* (2023 Johannesburg: Eskom Holdings SOC Limited).
[40] G Prasad and S Dieden, 'Tariffs for low-income customers in South Africa: issues of equity and adequacy.' (2009) *Development Southern Africa*, 26(3), pp.433–449.

supply infrastructure quality a supply-side proxy that is self-reported and spatially arbitrary.

7.0 COMPARATIVE ANALYSIS II — INDIA'S MULTI-TIER LIFELINE TARIFF MODEL

7.1 Sector Overview

India's electricity sector is the world's third largest by installed capacity and presents a dramatically different structural context from Nigeria. The sector is governed at the state level, with State Electricity Regulatory Commissions (SERCs) setting tariffs for State Distribution Companies (DISCOMs), under a national framework established by the Electricity Act 2003 and the National Tariff Policy (revised 2016). India achieved near-universal electrification under the Saubhagya scheme by 2019, connecting approximately 26 million previously unconnected households, though supply quality varies enormously across states.[41]

7.2 Lifeline Tariff Architecture and the Saubhagya Model

India's tariff differentiation model is multi-dimensional, combining consumer category classification (domestic, commercial, industrial, agricultural) with consumption-block pricing within domestic categories. Most SERCs maintain a lifeline tariff, a below-cost rate applicable to the lowest consumption block alongside an Inclining Block Tarrif structure for higher consumption. State-specific rates vary considerably and are set through annual regulatory proceedings, with each SERC publishing detailed tariff orders that are publicly available and independently

[41] Ministry of Power, India, *Saubhagya Scheme: Final Report on Household Electrification*. (2019, New Delhi: Government of India).

verifiable.[42] Many states also operate subsidy-in-tariff mechanisms under which the state government explicitly compensates Distribution companies (DISCOMs) for the gap between lifeline tariffs and cost-of-service, creating transparent fiscal accountability.

India's RDSS (Revamped Distribution Sector Scheme) and PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) schemes have further introduced targeted capital subsidies for distribution infrastructure, separating the investment financing problem from the tariff design problem; a conceptual separation that is absent in Nigeria's SBT framework .[43] This separation is analytically important assuming that if the purpose of banding is to finance investment, the appropriate instrument is a targeted capital subsidy or regulatory asset base mechanism, not a tariff surcharge on better-served consumers.

7.3 Data Infrastructure and DBT Reforms

India's most instructive contribution to comparative analysis is its investment in the data infrastructure necessary for targeted subsidies. The Direct Benefit Transfer (DBT) program, rolled out across utility subsidies from 2015 onwards, enables electricity subsidies to be credited directly to verified beneficiaries' bank accounts linked through Aadhaar biometric identification rather than embedded in tariff structures.[44] This allows cost-reflective tariffs to be applied universally while directing compensatory

[42] Ministry of Power, India, *Annual Report 2022–23.* (2023, New Delhi: Ministry of Power, Government of India).
[43] *ibid*
[44] Ministry of Finance, India, *Direct Benefit Transfer Mission: Annual Report 2020–21*. (2021, New Delhi: Government of India).

transfers to identified poor households, eliminating the regressive infrastructure-proximity problem.

The DBT model is not without implementation challenges as Aadhaar linkage excludes some marginalized households, digital financial inclusion gaps affect benefit receipt, and DISCOM billing systems require significant IT capacity.[45] Nevertheless, India's experience demonstrates that the technical obstacles to targeted subsidy delivery are surmountable and do not justify the blunt distributional instrument of infrastructure-proximate banding.

8.0 COMPARATIVE LESSONS FOR NIGERIA

The comparative analysis reveals three structural insights that have direct implications for Nigerian tariff reform.

On the first note, it is pertinent to note that both South Africa and India anchor their tariff differentiation mechanisms in consumption volume a demand-side variable that is directly metered, individually attributed, and reasonably correlated with the ability to pay. Nigeria's supply-hour proxy is a supply-side variable that reflects historical infrastructure investment and DisCo operational choices rather than consumer income or welfare. The transition from supply-side to demand-side differentiation requires, as a precondition, universal metering, an investment that should be treated as the highest-priority structural reform in the NESI. NERC's own data

[45] P Barnwal, 'Curbing leakage in public programs with direct benefit transfers: evidence from India's fuel subsidies and black markets. (2019) *Journal of Development Economics*, 139, pp.1–14.

showing 55.61 per cent of customers unmetered as of end-2023 underscores the urgency of this prerequisite.[46]

Secondly, India's experience with the RDSS and PM-KUSUM schemes illustrates that infrastructure investment can be financed through direct capital mechanisms without embedding investment incentives in tariff structures. Nigeria's SBT conflates the revenue problem (sector insolvency), the investment problem (network decay), and the equity problem (poor household protection) into a single blunt instrument, producing a design that addresses none of the three adequately. Disaggregating these objectives into distinct policy instruments identified as cost-reflective tariff design, a targeted subsidy model, and a capital investment fund objective would improve policy coherence and accountability.

Finally, South Africa's constitutionally justiciable socio-economic rights and India's DBT audit trails provide accountability mechanisms that are entirely absent from Nigeria's SBT. When subsidy incidence is opaque and band classification is self-reported, regulatory governance depends entirely on NERC's institutional capacity and independence, both of which are constrained. Legislative anchoring of minimum service standards, transparent subsidy budgeting, and independent band verification are institutional prerequisites for a defensible differentiated tariff regime.

9.0 CONCLUSION

[46] NERC, *Annual Report 2023: Metering, Customer and Tariff Data*. (2023a).

This paper has argued that Nigeria's electricity supply banding is poorly designed and not capable of achieving the equity objectives of consumer protection and vulnerable to regulatory capture. The supply-hour classification proxy reproduces spatial inequality among consumers, enables DisCo opportunism, and fails to identify or protect the households most dependent on affordable electricity.

The comparative analysis with South Africa and India demonstrates that consumption-based differentiation anchored in verifiable metering, transparent subsidy budgeting, and separated investment financing provides a more robust architecture for achieving both financial sustainability and distributional equity. Neither comparator is without its own limitations South Africa faces tariff escalation and IBT calibration failures; India confronts digital exclusion and DISCOM institutional weakness, but both offer design lessons directly applicable to Nigeria's reform agenda.

It is further considered that equitable tariff design is not primarily a technical problem but a governance imperative. Nigeria's SBT fails not because cost-reflective differentiation is wrong in principle but because the institutional conditions for universal metering, independent verification, transparent subsidy accounting, and justiciable consumer rights that make differentiation equitable and defensible do not yet exist. The reform agenda must therefore be understood as an institutional investment program, not merely a tariff adjustment exercise.

Future research should focus on three empirical gaps: first, a nationally representative household survey linking band classification to income quintiles; second, an econometric assessment of DisCo revenue recovery

under the SBT against investment outcomes; and third, a socio-legal analysis of NERC's institutional independence and its implications for regulatory capture risk in the Nigerian context.