

Wind, Biogas and Small Hydro in Nigeria:

The Legal Framework,
Pathway to Deployment
and Lessons from Germany

Introduction

More than 85 million Nigerians lack access to electricity, the largest unelectrified population in the world.¹ What Nigeria lacks is not energy, but infrastructure. The wind speeds in the northern savannah are sufficient for utility-scale generation;² various abattoirs, breweries, and municipal waste systems throughout the country generate sufficient organic feedstock to power biogas plants;³ and hundreds of river locations with small-hydro potential remain surveyed but yet to be harnessed.⁴

The legal framework for the harnessing of these resources is present. Prior to the Electricity Act 2023 (“EA”), there were various legal instruments, including the Electric Power Sector Reform Act 2005 (“EPSR Act”), the National Renewable Energy and Energy Efficiency Policy 2015 (“NREEEP”), and the SE4ALL Nigeria Action Agenda, all of which laid groundwork for the deployment of renewable energy in the Country. The EA, building on that groundwork, creates a technology-neutral licensing regime, recognising, alongside solar, wind, biogas, and small hydro. Recognition alone does not build power plants.

This article asks and answers three pivotal questions: what does the law provide, what must actually be done to venture into the market, and what financial incentives are available to support such a venture? The article closes with a brief look into Germany’s Renewable Energy Sources Act, whose two decades of experience converting statutory ambition into deployed capacity offer lessons Nigeria may find instructive.

85million

Nigerians without access to electricity — the largest unelectrified population on earth.

“What Nigeria lacks is not energy. It is infrastructure.”

The thesis

Legal Framework for Renewable Energy in Nigeria

The legal framework for renewable energy generation in Nigeria can be traced back to the EPSR Act 2005, which opened up the power sector to private participants.⁵ In 2015, the NREEEP⁶ went further by setting indicative targets for expanding clean energy access, diversifying the national energy mix, and optimising power consumption. In addition, the SE4ALL Nigeria Action Agenda expressed the nation's commitment to universal energy access, expanding renewable energy, and improving energy efficiency.⁷ These instruments laid the policy groundwork on which the EA built.

Cognisance must also be taken of the Fifth Alteration Act No. 33 to the 1999 Constitution, assented to in March 2023, which enabled states to now establish and regulate electricity markets within their territories. The EA acknowledges this shift by providing that undertakings operating under a state's electricity law are exempt from the federal licensing requirements, and the licensing of mini-grids and independent distribution networks within a state is reserved to state authorities.⁸ This dual regulatory structure is fundamental to understanding the legal framework for renewable energy deployment in Nigeria.

The federal licensing framework under the EA is technology-neutral, meaning that there is no restriction on the type of energy generation source permissible. The EA mandates obtaining a licence to engage in electricity generation from the Nigerian Electricity Regulatory Commission ("NERC"), which is empowered to grant such licences to independent power producers for the generation of electricity from renewable sources, including wind, small hydro, and biomass.⁹

The EA prohibits engaging in electricity generation without a licence, but exempts generation not exceeding 1MW per site and distribution not exceeding 100kW.¹⁰ Captive generation is excluded from the licensing requirement but subject to a NERC permit.¹¹ The deployment of mini-grids is governed by the Mini-Grid Regulations 2026 through a permit regime, with isolated systems under 100kW proceeding by simple registration.¹²

The NERC has also introduced feed-in tariffs for all small hydro schemes, biomass co-generation, solar, and wind plants irrespective of size via the Regulations on Feed-In Tariff for Renewable Energy Sourced Electricity in Nigeria, 2015 ("REFIT Regulations"). The REFIT Regulations guarantee a fixed price per unit of electricity delivered by qualifying generators over a twenty-year term.¹³

The Route to the Market

The law, no doubt, creates a detailed framework for regulation of renewable energy deployment. A developer or investor seeking to enter the Nigerian Electricity Supply Industry (“NESI”) through the deployment of any of the three technologies – wind, small-hydro, and biogas – would have to comply with the legal requirements for each technology, which are largely similar, albeit each technology carries additional sector-specific requirements. The specific steps a developer or investor may take to commence and kickstart the project would also depend on the scale and structure of the project.

The first step is to determine, in fact, whether the project requires a licence, only a permit, or simply registration with the NERC. As earlier noted, under the EA, a project with aggregate generation capacity exceeding 1MW at a site requires a NERC licence; however, where the project does not meet this threshold, it would be exempt from requiring a licence.¹⁴ For mini-grid projects, an alternative route is provided for under the Mini-Grid Regulations 2026, that is, a permit for isolated systems of up to 5MW or interconnected systems of up to 10MW; and a simple registration alone for smaller isolated systems (under 100kW).¹⁵

Once it has been determined whether licensing, a permit or a simple registration would be required, the developer must address ancillary regulatory approvals. These approvals differ based on the specific technology, but a common requirement amongst all 3 technologies is the requirement for environmental clearance. Notably, biomass and hydro projects, under the Mini-Grid Regulations, require a full environmental and social impact assessment.¹⁶ Projects that generate an amount of energy above the mini-grid threshold will also require environmental impact assessments under the applicable federal and state environmental legislation.

Upon satisfying the relevant regulatory requirements and obtaining the relevant licence, a qualifying generating company would be entitled to enter into a power purchase agreement (“PPA”) with the Nigerian Bulk Electricity Trading Plc (“NBET”) or the relevant distribution licensee at the applicable feed-in tariff rate under the REFIT Regulations.¹⁷ This grants the revenue certainty needed to structure project finance, as a secured PPA, in practical terms, moves the project from a permitted one to a bankable one.

Tier 01 Registration	Threshold ≤ 100kW Isolated mini-grid systems — a simple registration under the Mini-Grid Regulations 2026.
Tier 02 Permit	Threshold 100kW – 5MW Mini-grid permit route — up to 5MW isolated, up to 10MW interconnected.
Tier 03 Licence	Threshold > 1MW Full NERC licence — also required for projects exceeding the mini-grid thresholds.

Then occurs

A secured PPA with NBET or the relevant distribution licensee.

Priced at the applicable REFIT tariff — a 20-year fixed price per unit. In practical terms, this is what moves a project from a permitted one to a bankable one.

Technology-Specific Requirements

While the route to the market is broadly the same for the 3 technologies, each technology does have additional regulatory requirements that a developer must take cognisance of. Wind projects, for instance, must satisfy aviation-height clearance under the Civil Aviation Act 2022 and the Nigeria Civil Aviation Regulations 2023. Of note also is that the NERC, though empowered by the EA, has yet to issue the wind-specific standards.¹⁸ Biogas projects, on the other hand, must comply with the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, and applicable State environmental and waste-management laws apply alongside the EA. Small hydro developers must also navigate the water-use licensing framework under the Water Resources Act and the River Basin Development Authorities. In addition, they are subject to N-HYPPADEC levies and host community funding obligations under the EA, as revised by the Electricity (Amendment) Act 2024.¹⁹

**Wind**

Airspace & standards

Aviation-height clearance required under the Civil Aviation Act 2022 and the Nigeria Civil Aviation Regulations 2023.

**Biogas**

Environment & waste

Compliance with the National Environmental Standards and Regulations Enforcement Agency Act 2007.

**Small Hydro**

Water, basin, community

Water-use licensing under the Water Resources Act and the river basin authorities.

Incentives and Financial Support

An exhaustive and permissive legal framework is not sufficient; projects also need to be financially viable. In this regard, the law provides multiple incentive mechanisms which, when taken together, constitute a notable support architecture.

The most significant of these incentives would be the already mentioned feed-in tariff under the REFIT Regulations. This guarantees a fixed price per unit of electricity delivered over a twenty-year term,²⁰ backed by a mandatory purchase obligation on NBET or the relevant distribution licensee.²¹ The technology-specific capacity qualifying benchmark²² neatly allows for most early-stage projects to qualify.

On the tax side, the Nigeria Tax Act 2025 ("NTA") provides for Economic Development Tax Incentives ("EDTI") under which sectors listed in the Tenth Schedule to the Act are classified as priority sectors.²³ A company incorporated in Nigeria may apply to the NIPC for an economic development incentive certificate,²⁴ and if approved, the income tax otherwise payable on profits from the priority product or service during the incentive period constitutes a tax credit that can be utilised to offset the company's tax liability.²⁵

The tax incentive period is five years, extendable by a further five years where the company reinvests 100% of its profits in the same product.²⁶ Renewable energy generation qualifies as a priority sector, specifically, the operation of generation facilities that produce electricity from renewable sources, with a qualifying capital expenditure threshold of ₦100 billion and a sunset of 20 years.²⁷

Part XVI of the EA establishes the Rural Electrification Fund ("REF"). The REF is to be funded from appropriations, operator levies, and international grants, and administered by the Rural Electrification Agency with a mandate to extend electricity access to unserved communities through, among other means, renewable energy technologies.²⁸ Off-grid wind, biogas, and small hydro installations in rural areas are natural candidates for REF support.

At the international level, multilateral institutions maintain active lending and grant programmes for Nigerian renewable energy,²⁹ and the Power Africa initiative has provided transaction advisory and partial credit guarantee support.³⁰ Blended finance structures combining concessional and commercial capital are increasingly the template for bankable projects in this space.

The domestic capital markets also offer a route. The Securities and Exchange Commission's Rules on Green Bonds, issued in October 2018, provide a regulatory framework for the issuance of bonds whose proceeds are exclusively applied to finance or refinance projects with a positive environmental impact, including renewable energy.³¹ For a wind, biogas, or small hydro developer with a project of sufficient scale, a green bond issuance, potentially combined with credit enhancement from a development finance institution, could provide long-tenor project finance at competitive rates.

Lessons from Germany

Germany's Renewable Energy Sources Act (the *Erneuerbare-Energien-Gesetz*, or "EEG"), first enacted in 2000 and now consolidated as the EEG 2023,³² offers a few lessons for Nigeria's renewable energy goals.

One such lesson would be guaranteed grid access. The EEG requires electricity from renewable sources to be accepted onto the grid ahead of conventional generation.³³ While Nigeria's REFIT Regulations stipulate a must-buy obligation, ensuring wind, biogas, or small hydro generators have some level of certainty that their electricity will reach the grid would significantly improve such projects' bankability.

Germany's shift from administratively fixed feed-in tariffs to a market premium granted through competitive bidding³⁴ proffers Nigeria with another valuable consideration. As Nigeria's market matures, competitive auctions for renewable energy capacity would be more beneficial as it would drive prices down and allocate support to the most efficient projects.

Germany also integrates environmental requirements into the renewable energy licensing process itself. Adopting a similar approach in Nigeria would make for a more harmonised NERC licensing process and a reduction in project delays without a corresponding weakening of environmental protection.

Conclusion

Undoubtedly, Nigeria has the foundational legal provisions to support the development of renewable energy; the EA provides for a technology-neutral licensing framework, and the REFIT Regulations assign each technology a guaranteed tariff. The pathway to the development of a wind, small hydro, or biogas project is navigable, albeit not well trodden. The incentives are present and offer developers financial support. What we can glean from Germany's framework is that all these could still be built on. Priority grid access must be expressly stated and enforced, procurement should be competitive, and a harmonisation of both the environmental and energy framework would make the pathway more navigable. These are not legislative gaps; they are implementation choices. The architecture is in place. The task now is to build on it.

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Endnotes

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