



Strengthening Nigeria's Legal Framework to Advance Sustainable Green Electricity Practices

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Introduction

Nigeria's primary source of electricity is thermal, and currently represents roughly 70% of the on-grid energy in the country¹. Thermal energy is characterised with its negative effect on the world temperature, thereby leading to climate change. Unlike the thermal energy source which is finite and eco-unfriendly, Nigeria has abundant green, renewable and eco-friendly energy sources like solar, wind, geothermal, biomass and hydro.² For instance, Nigeria has (i) high solar resources potential with an average annual global horizontal irradiation of 1600 kilowatt hours per square metre (kWh/m²) and 2200 kWh/m² with highest values greater than 2000 kWh/m²; and (ii) large hydro potential of around 24 GW and small hydro potential of about 3.5 GW³.

Despite the abundance of the renewable energy sources and the global trend shift towards promotion of the renewable energy resources, the resources are very much underexploited for the most part⁴. Notably, investment in renewable electricity promises enhanced energy security, climate change mitigation, and economic growth, but Nigeria's energy sector predominantly relies on oil and gas, with minimal integration of renewable energy sources. This article seeks to address the significance of renewable energy, analyse barriers to its adoption in Nigeria, and advocate for affirmative legal measures to facilitate its integration, thereby contributing significantly to the nation's power sector.

Current Legal Framework For Renewable Electricity In Nigeria

The Constitution Of The Federal Republic Of Nigeria

The Constitution of the Federal Republic of Nigeria 1999 (As Amended) (the "**Constitution**") as the enabling legal framework emphasizes the need for national prosperity and balanced economic development⁵, and achieving that necessitates sustainable electricity supply. Although, the provision lacks enforceability, but other provisions of the Constitution particularly the recent amendment, decentralises the energy regulation by allowing the National Assembly and Houses of Assembly within their respective states to enact laws for the generation, transmission, and distribution of electricity⁶. Despite the absence of specific mention of renewable energy in the proviso, the proviso may be utilised to promote renewable energy advancements by the states and even the Federal Government of Nigeria.

The Electricity Act Of 2023

The Electricity Act of 2023 (the "**Act**") sets up salient measures that will help in advancing the production of renewable energy in Nigeria. It is part of the key objectives of the Act to establish a framework for the optimal growth of renewable energy. The Act accords recognition to the fact that renewable energy is still at an embryonic stage. As such, it empowers (i) Nigeria's Minister for Power to issue policy directives detailing measures for the advancement of the renewable energy in Nigeria; and (ii) the Nigerian Electricity Regulatory Commission (NERC), as the primary regulator of the electricity sector, to actively promote the development of renewable electricity⁷.

¹ International Trade Administration, U.S Department of Commerce 'Nigeria - Country Commercial Guide- Electricity Power Systems and Renewable Energy' <https://www.trade.gov/country-commercial-guides/electricity-power-systems-and-renewable-energy> accessed on July 27, 2024.

² O.O. Ajayi and O.O. Ajayi, 'Nigeria's Energy Policy: Inferences, Analysis and Legal Ethics toward RE Development' (2013) 60 Energy Policy 61, 61-62. See also D. Olawuyi, 'Power Generation through Renewable Energy Sources: An Analysis of the Legal Barriers and Potentials in Nigeria' (2013) 10 (2) Journal of Resources, Energy and Development.

³ International Renewable Energy Agency 'Renewable Energy Roadmap Nigeria Summary of Key Recommendations and Findings' <https://www.nigeria-energy.com/content/dam/markets/emea/nigeria-energy/en/2023/docs/NE23-NigeriaEnergyRoadmap-Report.pdf> accessed on July 29, 2024.

⁴ Ibid.

⁵ Section 16 of the Constitution.

⁶ Item 13 and 14 of the Second Schedule, Part II of the Constitution.

⁷ Sections 164 – 171 of the Act.

Specifically, the Act imposes certain obligations on the NERC in relation to renewable energy. Some of these are: to (a) stipulate in its licensing and fees schedule, simplified licensing and fees regime for issuance of licenses to renewable energy service companies for the provision of electricity to consumers and from renewable energy sources specified under the Act; (b) issue commercial and technical regulations for connectivity to the grid and distribution network for sale of electricity generated from renewable energy sources to distribution and trading licensees, eligible customers and other consumers; (c) provide standards for power purchase agreements with specific requirements and terms for marketing and trading renewable electricity; (d) monitor and enforce compliance with renewable purchase obligations and generation purchase obligations as may be prescribed by the NERC; (e) provide mini-grid regulations on renewable energy to cater for installation, metering, billing and other requirements, for renewable energy mini-grid systems⁸.

National Integrated Electric Policy And Strategy Implementation Plan (NIEPSIP)

The NIEPSIP is a policy document aimed at driving renewable energy development. Notably, the NIEPSIP does not have a binding force *per se*, because it is merely a directional policy document for the agencies in the energy sector; its significance lies in its influence on laws promoting renewable energy sector development, as it is often that policies precede laws.

The Act mandates the Federal Ministry of Power to issue the NIEPSIP within a year of enactment of the Act and to be reviewed every five (5) years⁹. The scope of the NIEPSIP includes the (i) development of the power sector based on the optimal utilization of renewable energy sources such as solar, wind, hydro, and (ii) development of power, source, specific policies that will stimulate development of renewable energy¹⁰.

On August 28, 2024, the Federal Government unveiled a draft paper on the NIEPSIP at the NIEPSIP Zero Draft Presentation in Abuja. The NIEPSIP outlines policy interventions across the entire value chain, from generation and transmission to distribution and off-grid segments of the sector required for the transformation of Nigeria's electricity sector to a sector that is resilient, efficient, and capable of driving the national development agenda. One of the major features of the NIEPSIP is that it outlines policies for improved sector liquidity, and the integration of renewable energy sources, to ensure equitable access to electricity for all Nigerians, particularly those in underserved communities.

Regulatory Framework For Electricity In Nigeria

The Nigerian Electricity Regulatory Commission (NERC)

Under the Act, NERC serves as the primary regulator of the Nigerian Electricity Supply Industry (NESI) and is vested with the authority to promote the optimal development and utilization of renewable energy to increase its contribution to Nigeria's electricity mix¹¹.

For example, as part of the promotion mandate, the Act mandates the simplification of licensing procedures for renewable electricity projects by the NERC¹². This streamlined process aims to make renewable energy more appealing to investors. Additionally, NERC is tasked with ensuring that pricing mechanisms favor renewable energy consumers and providing incentives to support independent power producers investing in the sector¹³.

⁸Section 164 of the Act.

⁹Section 3 of the Act.

¹⁰Section 3 of the Act.

¹¹ Section 164 of the Act.

¹² Section 164 of the Act.

¹³ Section 164 of the Act.

Rural Electrification Fund (“REF”) And Rural Electrification Agency (“REA”)

In another bid to promote optimal utilization of renewable energy, the Act established the REF, which is to be managed by the REA. The REF is established to support renewable electricity investments and projects in rural and underserved areas of Nigeria¹⁴. Notably, unlike under the repealed Electric Power Sector Reform Act of 2005, where REF was used to support both renewable and fossil fuel electricity projects, the REF under the Act only supports renewable energy development.

Furthermore, the Act introduces the facilitation of tax incentives and affordable interest loans for local producers of renewable energy products for electrification¹⁵. These incentives aim to reduce investment costs in the renewable energy sector and make it more competitive with fossil fuel investments. Additionally, REA is responsible for executing renewable energy projects in rural areas, with a focus on promoting the use of renewable energy.

National Hydroelectric Power Producing Area Development Commission (N-HYPPADEC)

The Act places a special emphasis on the promotion of hydroelectricity development through the establishment of N-HYPPADEC with special mandate to collaborate with state and federal governments in promoting hydroelectricity development in Nigeria¹⁶. This aligns with the recent constitutional amendments empowering state governments to generate, transmit, and distribute electricity from various sources.

Further, the N-HYPPADEC is responsible for addressing ecological challenges arising from dam overloading and other environmental hazards in hydroelectric power-producing areas. The establishment of N-HYPPADEC underscores Nigeria's commitment to ensuring energy security, increasing optimal utilization of renewable energy, particularly hydro energy, and achieving the Nigeria's net-zero targets.

Why Green Electricity?

Nigeria is bedeviled with incessant electricity crisis, a report shows that (i) in the last 14 years spanning across 2010 and 2023, the country's power supply has suffered roughly 232 partial and total collapse due to inability of the power grid to maintain stability¹⁷, and (ii) more than 40% of Nigerians have no access to electricity¹⁸. Further, Nigeria is currently contributing to environmentally damaging activities, particularly increasing its global share of greenhouse gas (GHG) emissions, because of the reliance on fossil fuel for electricity generation¹⁹. Thus, the quickest way to tackle the electricity crisis is through promotion of optimal utilization of renewable energy.

Another improvement that the renewable energy will bring to Nigeria, particularly economy wise, is that the cost of extracting, tapping and harnessing energy from the renewable sources is relatively low in long-term utilization compared to that of fossil fuel. Renewable energy has the capacity of being restocked by a natural method at a value that is proportionate to the energy being utilized. Consequently, the supply of alternative energy is cheaper than that of fossil fuel²⁰. Lastly, the

¹⁴ Sections 142 and 143 of the Act.

¹⁵Section 166 of the Act.

¹⁶Section 82 of the Act.

¹⁷ Emmanuel Addeh 'Nigeria's Power Supply Woes Continue', <https://www.thisdaylive.com/index.php/2024/02/11/nigerias-power-supply-woes-continue/> accessed on September 24, 2024.

¹⁸ Minister of Power Adebayo Adedun '92 Million Nigerians without electricity worry FG' <https://punchng.com/92-million-nigerians-without-electricity-worry-fg/> accessed September 24, 2024.

¹⁹ P.B. Eregba, "Sustainable Energy and Sustainable Development: Which Way Forward for Nigeria?" in A. Adenikinju, A. Iwayemi and W. Iledare, *Green Energy and Energy Security Options for Africa: Proceedings of the 2012 Conference of the Nigerian Association of Energy Economics* (Ibadan: Atlantis Books 2012) 304.

²⁰ See generally K.U.K. Ekwueme, "Nigeria's Principal Investment Laws in the Context of International Law and Practice (2005) 49 (2) Journal of African Law 177, 177–206.

collection, transformation and consumption of renewable energy usually takes place in an ecologically friendly manner. It forestalls damaging effects on the practicability of the energy and the inherent privileges of the inhabitants of the societies where it is utilized and natural environment contrary to fossil fuel sources of energy.

Challenges Facing Green Electricity Advancement In Nigeria.

High Cost Of Renewable Energy Projects

A major drawback to the development of renewable energy in the power sector is in the expensive technologies needed. The up-front capital cost for renewable energy is higher than that of conventional energy projects²¹.

Inability Of Consumers To Pay For Electricity

The inability of consumers to pay for electricity is a major concern in Nigeria. Most consumers cannot afford the price of electricity due to the unstable Nigeria's economy without subsidy²². Therefore, many consumers would not afford to pay for renewable energy at a price enabling cost recovery.

Inadequate Framework For Funding

Investment in renewable energy is faced with challenges characterized by low credit ratings and low availability of capital for investment²³. Financing new renewable energy projects by loans, with high interest rates would not yield favourable results.

Recommendations For Promoting Sustainable Green Electricity.

Redefining The Roles Of Institutions Relevant To Renewable Energy

The electricity industry should be redefined through a robust framework that will harmonize respective government agencies in the Nigeria's renewable electricity industry, by clearly spelling out the roles of the agencies. NERC and the Energy Commission can be strengthened in the implementation of incentives under the tariff scheme in operation, and the promotion of renewable energy through the introduction of demonstration projects and programmes.

Establishing Robust Framework For Funding

There is a need for the development of a robust framework for funding renewable energy projects. Apart from the various commercial banks, there should be specialized banks, which could be used in funding renewable energy projects. Also, the National Agriculture Bank, Bank of Industry, Central Bank of Nigeria among others, can offer support for the development of biomass feedstock for production of electricity from biomass sources.

For example, in India, the Indian Renewable Energy Development (IREDA) in furtherance of its plan to achieve 500 GW non-fossil fuel-based electricity generation capacity by 2030, has partnered with several national and international banks such as the Punjab National Bank, Bank of Baroda, Bank of India, Union Bank of India, Bank of Maharashtra, and Indian Overseas Bank. The Memorandum of Understanding signed with these agencies focus on co-lending and loan syndication to implement a wide range of renewable energy projects across India²⁴.

²¹ National Planning Commission (NPC), Report of the Vision 2020 National Technical Working Group on Energy Sector (NPC, 2009) 57.

²² The Association of Electricity Distributors of Nigeria (ANED), <https://theelectricityhub.com/most-nigerians-cant-afford-electricity-without-subsidy-discos/> accessed on October 14, 2024.

²³ O. Nnodim, 'FG signs N55bn Renewable Energy Agreement' www.punchng.com/news/fg-signs-n55bn-renewable-energy-agreement-withge-2/ accessed on April 24, 2024.

²⁴ Economic Times, www.economicstimes.com/industry/renewables/indian-renewable-energy-development-agency-punjab-national-bank-to-co-finance-green-electricity-projects/amp_article/show/107818307.com accessed on October 12, 2024.

Subsidizing The Cost Of Electricity For Underprivileged Consumers

The ideal trend in a competitive electricity market is one in which the consumers should bear the cost of energy services. However, in Nigeria, the consumers cannot bear the extra cost of generation of electricity from renewable energy due to the rising inflation in the country and the cost of renewable energy equipment²⁵. Thus, steps should be taken to implement the Power Consumer Assistance Fund (PCAF) established to subsidize the amount paid by underprivileged consumers.

Framework For Information On Renewable Energy In The Market

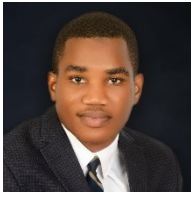
The publication of the progress report made on the success of the scheme should be made publicly available. NERC should be charged under the Act with giving an annual adequate progress report on the promotion of renewable energy.

Conclusion

Effective integration of renewable energy into Nigeria's electricity sector necessitates a supportive legal framework addressing existing challenges. It is undoubted that with proactive legislative efforts, Nigeria can advance renewable energy adoption, fostering sustainable development and energy security. Thus, embracing renewable energy as a key component of its energy mix will help Nigeria achieve its economic and environmental goals while ensuring reliable and affordable electricity supply for all citizens.

²⁵ Foundation for Investigative Journalism, <https://fij.ng/article/desirable-but-expensive-nigerias-clean-energy-dilemma/> accessed on October 14, 2024.

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