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An Overview Of The Legal And Institutional Framework For Renewable Energy In Nigeria

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ABSTRACT

With the high increase in global population, there is a shift from fossil fuel as the main source of energy to renewable energy, due to its high level of environmental degradation. This demonstrates that in order to meet global demand, more funding must be allocated to renewable energy. Nigeria has abundant renewable energy resources that can be used to meet its energy needs, including solar, wind, biomass, and hydropower. In other to achieve a competitive, stable and healthy environment for renewable energy advancement, there are certain tax policies and legal reforms that must be put in place to encourage investments, environmental sustainability and growth. This paper examined some legal and institutional framework geared towards the realization and improvement of renewable energy technologies in Nigeria. The paper also examined relevant national legislation, international instruments and supervisory and governing agencies and institutions responsible for the advancement of renewable energy in Nigeria. The paper also looked at how tax laws and legal changes might encourage investments in renewable energy, making the industry more alluring to investors. Renewable energy meets the pressing demand for sustainable energy solutions in the face of mounting environmental concerns. This was accomplished through the use of doctrinal research methods.

Keywords: Renewable Energy, Legal and Institutional Framework in Nigeria

1. INTRODUCTION

Access to energy services is crucial to the well-being and development of countries and their social, economic, and political ecosystems. Energy still has a major impact on the development of any country or region. Actually, it is necessary to provide fundamental needs including food, water, transportation, healthcare, and education for both individuals and communities[1]. Fossil fuels such as coal, lignite, tar sand, natural gas, and crude oil have been the main source of energy in the globe for a long time.[2] This energy source provides three-quarters of the world's energy demands. Fossil fuels are also bad for the environment. One of the main anthropogenic activities known to contribute to climate change is its exploration and production[3]. There is growing consensus on the need to abdicate fossil fuels combustion in order to reduce emissions, seek renewable energy sources utilization to foster sustainability. The need of decarbonizing Nigeria's energy base through the use of renewable energy sources to ensure sustainability cannot be overstated. The government has established a target of 30% renewable energy

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[1] T. Esan "Status of Renewable Energy Policy and Implementation in Nigeria" (2008) Institute of Science and Society. University of Nottingham, United Kingdom. www.gbengasesan.com/temidocs/REPStatusNigeria.pdf (accessed 8th February 2025)

[2] O. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects (2017) (1) (*UNILAG Law Review*) page 23.

[3] Intergovernmental Panel on Climate Change (IPCC), 'Fifth Assessment Report (AR5 WG1)' (2013), Summary for Policymakers, 4

sources by 2030 and has implemented a number of programs to achieve this[4].As global temperatures rise and the effects of climate change become more apparent, there is an increasing need to transition from fossil fuels to renewable energy sources like solar, wind, and biomass. The importance of moving to renewable energy in the fight against climate change and the pursuit of sustainable development is increasingly recognized. In addition to its positive effects on the environment, renewable energy provides prospects for both economic expansion and energy stability. With the abundance of sun, wind, hydro, geothermal, and biomass resources in Africa, their potential is especially apparent[5]. Geothermal, wind, hydropower, solar, and renewable fuels are just a few of the renewable energy resources that Nigeria has a tonne of potential for. In contrast to conventional energy sources like coal, oil, and natural gas, these sources are limitless and safe for the environment[6]. Despite an unprecedented number of foreign companies bidding directly or in partnership with local companies as technical partners in the recently concluded bid round for the privatization of state power companies, Nigeria is yet to capitalize on the wealth of renewable energy for its socio-economic development. The Nigerian electric power industry is expected to develop as a private sector-driven industry[7]. Nigeria's electricity industry has now been privatized, but because there is no clear policy for renewable energy, it has not yet been liberalized in practice. The supply of inexpensive, accessible, and consistent electricity for Nigeria's industrial growth, job creation, and poverty alleviation depends on whether alternative or renewable energy sources are available. Investment in renewable energy technology is still insufficient to satisfy the rising demand for clean energy solutions, notwithstanding these benefits. The high initial costs of renewable energy technology, along with doubts about their long-term viability, are among the main obstacles to more investment in this sector. By offering incentives that reduce investment costs, tax laws can be extremely important in reducing these financial risks. In this instance, the mechanisms that indirectly affect the production and consumption of renewable energy are tax credits and tax exemptions[8]. There are two main ways to lessen the impact of pricey renewable energy technology on the market: "production tax credits" and "investment tax credits." The goal of tax credits is to increase market competition in the renewable energy sector. A tax credit for investments is a reduction in all or a portion of the taxes due on taxable income investments made in renewable energy. On the other hand, production tax credits are annual tax credits that are determined by the amount of renewable energy produced. For every unit of heat or electricity produced, producers of renewable energy are eligible for a tax benefit under this method. However, tax exemptions can be used to avoid taxation laws, issues, and market distortions related to the production and consumption of energy[9]. In academic and policy circles, the effect of tax incentives on energy sector investments has been extensively discussed and studied. Numerous studies have examined the effects of various tax incentives, such as tax exemptions, production tax credits, investment tax credits, and accelerated depreciation, on the uptake of renewable energy technology and the overall attractiveness of energy-related projects to investors.[10] Along with the financial incentives, the legal framework surrounding renewable energy is essential. Legal reforms are needed to establish a stable and predictable regulatory environment that draws investment. This includes removing administrative obstacles that could deter potential investors as well as passing and enforcing legislation that are helpful. The Nigerian government has shown a ready commitment to promoting the development of renewable energy in Nigeria through legal and regulatory reforms, even though there are still problems with the current framework that need to be looked into and fixed in order to integrate RE into the larger Nigerian

[4] Energy Commission of Nigeria & Federal Ministry of Science and Technology, (2014*) National renewable energy and energy efficiency policy*. Abuja: Federal Republic of Nigeria.

[5] M. Hafner and others, *Energy in Africa*, (Springer Briefs in Energy, 2018) 47

[6] O. A. Oluseyi, & O. A. Oluwatoyin, Inferences, Analysis and Legal Ethics RE Development [2013] (60) *Energy Policy*, 61.

[7] O. Yemi, 'Nigerian Energy Resources Law and Practice', (2019)

[8]Nergis Feride, 'Taxation and Incentives in Renewable Energy Investments' (2023) Vol 22 (85) (*Electronic Journal of Social Sciences*) pages 220-245.

[9] F. K. Aydınlı, 'Supporting renewable energy: The role of incentive mechanisms'(2013). The Degree of Master of Science in The Department of Economics, Graduate School of Social Sciences of Middle East Technical University, Ankara

[10] Y. Sonjaya and M. Yamin 'Analysis of the Effectiveness of Tax Incentives on Energy Sector Investments' (2024) 2(2) (*Advances in Taxation Research*) 120 – 131

energy value chain, improve EE, and establish Nigeria as an African hub for RE[11]. This paper will discuss some of the legal and institutional framework for renewable energy advancement in Nigeria.

2. Conceptual Clarification

i. Energy

Energy is defined as natural resources, power generation, distribution, and consumption, as well as fuel sources that are subject to government regulation in order to safeguard the general welfare, encourage sustainable growth, and achieve a balance between social, economic, and environmental goals. With an emphasis on resource management, environmental preservation, and public welfare, this includes rules and regulations controlling fossil fuels (such as gas and oil) and renewable energy sources (such as solar and wind).[12] Modern culture and economic prosperity depend on energy, without which poverty persists. Resources for natural energy are frequently found in isolated locations far from major cities. While users reside in distant, densely populated cities, coal, oil, gas, geothermal energy, and hydropower sources are typically found in arid regions, mountains, and deserts.[13]Energy still has a major impact on the development of any country or region. Urbanization, fast population growth, and industrialization - all of which are frequently the fundamental features of growing markets usually raise energy consumption in these areas. To achieve long-term development goals and economic growth, these energy demands must be satisfied sustainably. In actuality, energy is necessary to provide fundamental needs including food, water, transportation, electricity, health care, and education for both individuals and communities.[14]

ii. Renewable Energy

Clean energy, often known as renewable energy, comes from naturally occurring processes or sources that are continuously renewed. These include of water, wind, tides, sunlight, geothermal heat, and different types of biomass[15]. This type of energy is perpetually renewed and cannot be depleted. Examples of such sources that are continuously replenished are sunlight and wind. We are surrounded by abundant renewable energy sources. In contrast, fossil fuels - coal, oil, and gas - are non-renewable resources that form over hundreds of millions of years. Carbon dioxide and other dangerous greenhouse gases are released when fossil fuels are burned to generate electricity. Renewable energy, according to Elum and Momodu, is energy that comes from natural processes that may be restored quickly. These processes can be obtained directly or indirectly from the sun and other natural systems. Hydropower, bioenergy, thermal, geothermal, wind, photochemical, photoelectric, tidal, wave, and solar energy are some of these sources. Energy derived from fossil fuels (oil, coal, and natural gas) is not included[16]. On the other side, Banji and Najeem[17] clarified that renewable energy has been found to be a reliable and ecologically benign alternative to fossil fuels. For both wealthy and developing countries, renewable energy is largely a feasible strategy for sustainable development. Nigeria's energy problems can be solved using renewable energy. In addition to being limitless and sustainable, it can be built in smaller units, making it suitable for ownership and management by rural communities and potentially essential for economic growth. A key component of sustainable development, renewable energy reduces greenhouse gas emissions and provides a variety of energy sources and security[18]. Additionally, TREIA provided a suitable definition of renewable energy, which the Texas Legislature has accepted and is as follows:

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[11]O. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects (2017) (1) (*UNILAG Law Review*) 25

[12]P. R. O'Neill**,** *Energy Law in Context: National and International Regulation* (Oxford University Press, 2017), 45–47

[13]A. Kalair, and N. Khan 'Comparative study of HVAC and HVDC transmission systems' (2016) (Renewable and Sustainable Energy Reviews)

[14]O. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects (2017) (1) (*UNILAG Law Review*) page 22

[15] L. Shinn 'Renewable Energy: The Clean Facts' <https://www.nrdc.org/stories/renewableenergy-clean-facts#sec-whatis> accessed 4 June 2025

[16] Z. A. Elum and A. S. Momodu, 'Climate Change Mitigation and Renewable Energy for Sustainable Development in Nigeria: A discourse approach', 2017, Renewable and Sustainable Energy Review, < https:// www.elsevier.com/locate/rser. > accessed 14 June, 2025.

[17]B. A. Olanipekun and N. O. Adelakin, 'Assessment of Renewable Energy in Nigeria: Challenges and Benefits', Vol. 68, Issue 1 Jan. 2020, *International Journal of Engineering Trends and Technology* (IJET), < https://www.reseachgate.net/publication/338798056. > Last accessed 14 June, 2025.

[18]*Ibid*.

Any energy source that is naturally replenished over a brief period of time is considered renewable. It can be obtained directly from the sun (thermal, photochemical, and photoelectric energy), indirectly from the sun (wind, hydropower, and photosynthetic energy stored in biomass), or indirectly from other natural environmental movements and mechanisms (geothermal and tidal energy). Fossil fuel-derived energy resources, fossil fuel-derived waste products, and inorganic waste products are not included in the definition of renewable energy.[19]

The idea of renewable energy is the same regardless of the definition. They are therefore regarded as the way of the future because they are unlimited, self-replenishing, ubiquitous, and environmentally friendly, in contrast to fossil fuels. Emissions from burning fossil fuels are far higher than those from producing renewable energy. The key to solving the climate catastrophe is switching from fossil fuels, which now produce the majority of emissions, to renewable energy. Compared to fossil fuels, renewables currently create three times as many employment and are less expensive in the majority of nations.[20] Renewable energy is rapidly replacing fossil fuels as the world's energy source. The primary reason for this is its benefit to the environment. The development of renewable energy expands Nigeria's power supply alternatives on a national level. This is essential given that Nigeria's enormous population cannot be served by the country's current power supply. Sustainable development and energy are inextricably linked, and it is clear that achieving sustainable development requires energy sustainability[21]. Given the aforementioned, the UN requires its member states to switch to more economical and environmentally friendly energy sources[22]. "Clean energy" is another term for renewable energy. All forms of renewable energy are considered the "greenest energy source," have become widely accepted, and are preferred over fossil fuels[23]. In every nation on the planet, the use and exploitation of renewable energy sources (RES) is the cornerstone of sustainable development. Indeed, one weapon for sustainability is renewable energy. Significant energy security, climate change mitigation, and economic benefits arise from its quick adoption[24].

3.Types of Renewable Energy

a. Hydro Energy in Nigeria

Using mechanical turbines to transform the kinetic energy of water into electrical power, hydropower energy generation depends on the volume and velocity of the water.[25] Nigeria's abundance of huge rivers and waterfalls offers enormous potential for the development of its water resources. Eleven major river basins, each with a network of minor rivers and waterways, comprise the nation's water resources. These water systems are appropriate for a number of applications, such as home use, industrial operations, hydroelectric power generation, and agricultural, because they consistently maintain sufficient minimum flow levels throughout the year. Nigeria's abundance of river systems makes it a country with significant hydroelectric potential. Nigeria possesses a wealth of renewable energy resources, most of which are still unexplored. The potential for hydropower energy generation in Nigeria is massive. According to estimates, the overall exploitable potential of hydropower is above 14,120 MW, or more than 50,800 GWh of electricity annually. According to a 2018 assessment by the International Hydropower Association, Nigeria's hydropower has an installed capacity of 2,062 MW, with over 85% of that capacity still unbuilt. This helps to address the country's present power shortages. The Kainji and Jebba dams are

[19] Texas Renewable Energy Industries Alliance, Definition of Renewable Energy, http://www.treia.org/renewable-energy-defined/, (accessed 14th June, 2025)

[20] A. Johnson, 'Sustainability in Engineering Design' (2014) (*Academic Press*) 285-344

[21], S. O. Oyedepo, 'On energy for sustainable development in Nigeria' (2012) 16(5), (*Renewable and Sustainable Energy Reviews*) 2583-2598

[22]O. L. Omoregie, 'Fostering Sustainabiity through Renewable Energy Resource Development: The Law and Policy in Nigeria' (*The IAFOR International Conference on Sustainability, Energy & the Environment Hawaii 2020 Official Conference Proceeding*)

[23] L. Shinn 'Renewable Energy: The Clean Facts' <https://www.nrdc.org/stories/renewableenergy-clean-facts#sec-whatis> accessed 4 June 2025

[24]A. J. Bradbrook, The development of renewable energy technologies and energy efficiency measures through public international law. In D. N. Zillman & others, Beyond the carbon economy: energy law in transition (New York: Oxford University Press 2008) 109-132.

[25] I.A. Ikem and ors, 'Integration of Renewable Energy Sources to the Nigerian National Grid - Way out of Power Crisis', (2016) (5) (8) *International Journal of Engineering Research.* 694

Nigeria's most important hydroelectric sources.[26] In 2019, Nigeria produced only 2,062 MW of hydropower. Only around 15% of Nigeria's hydro potential has been realized, according to the country's National Renewable Energy Efficiency Policy (NREEEP).[27]Nigeria is endowed with natural waterfalls and sizable rivers. Nigeria's main hydroelectric resources are the Chad Basin and the Niger and Benue Rivers. The country only produces roughly 2,062 MW of hydro-powered electricity out of the estimated 14,120 MW of anticipated generation, meaning it is unable to fully exploit 85% of her hydropower capacity and cannot address current power shortages. In response, the NREEEP had declared that the Federal Government's top objective was to fully utilize the nation's hydroelectric potential by encouraging private industry and indigenous involvement in hydropower development in a sustainable and ecologically responsible manner.[28] Compared to fossil fuel-based energy sources, hydro energy has a lower environmental impact and is renewable, making it an excellent choice for sustainable energy development. It is a crucial part of Nigeria's renewable energy plan since it lowers greenhouse gas emissions, increases energy security, and stimulates economic growth by creating jobs and improving infrastructure. Adopting and using hydropower as a renewable energy source is essential to securing a sustainable energy future and promoting a robust energy-stimulated economy.

b. Biomass

The most significant source of energy produced by agriculture is biomass. The rejected portion of the available biomass, biodegradable waste, is another source of this energy[29]. Fuels derived from plant and animal waste are referred to as biomass energy[30]. The organic stuff that stores solar energy in chemical bonds is known as biomass. Carbon, hydrogen, and oxygen molecules release stored energy when their bonds are broken by digestion, combustion, or decomposition. When organic matter is transformed into energy, biomass energy is produced. Agro-residues, animal waste, municipal solid waste, and forest residues are the biomass sources taken into consideration. It was found that the majority of Nigeria's biomass energy comes from agro-leftovers, city trash, and livestock waste, with forest residues making up the least amount. From roughly 3.2 EJ in 2010 to roughly 5.5 EJ in 2020, and possibly as high as 29.8 EJ in 2050, the energy potential is likewise anticipated to keep increasing.[31]The estimate will have a significant impact on future energy supply and compares favorably with projected energy demand. Fuelwood, charcoal, vegetation, sawdust, agricultural residues, animal waste, aquatic biomass, urban garbage, and industrial byproducts are all considered biomass resources in Nigeria. In Nigeria, especially in Northern Nigerian households, firewood, also known as fuelwood, is frequently used. According to a report, 72% of people in the north rely on fuelwood on a daily basis, and 90% of families use firewood for cooking.[32] The agricultural sector of the nation produces a wide variety of goods with significant potential for the manufacture of biofuel, including castor oil, sugarcane, cornstalk, rice husk, coconut, cashew nuts, peanuts, sesame, jatropha curcas, and cassava. However, Nigeria has very few biofuel enterprises because of the country's strong reliance on conventional fossil fuels.[33]

c.Wind as a Source of Energy in Nigeria

The movement of air masses brought on by pressure differentials and sun heating of the Earth's surface generates wind energy.[34]Being a renewable energy source, wind power may be used continually without endangering the environment because it doesn't deplete over time. It fits in nicely with international initiatives to lessen reliance on fossil fuels and switch to renewable energy sources. In 2019, Nigeria

[26]J. Nchege and C. Okpalaoka, 'Hydroelectric production and energy consumption in Nigeria: Problems and solutions,' (2023) (vol 219) (2) *Science Direct Journals & Books*. page 1

[27] National Renewable Energy Efficiency Policy of Nigeria of 2015

[28] International Hydropower Association, *Nigeria's Profile*, International Hydropower Association, (June, 2018), https://www.hydropower.org/country-profiles/nigeria. accessed 27 June, 2025

[29] M. A. Alrikabi 'Renewable Energy Types' (2014) (Vol. 2, No. 1), *Journal of Clean Energy Technologies*. Page 62

[30]U. B. Akuru, & others,'Towards 100% renewable energy in Nigeria'. (2017) 71, (*Renewable and Sustainable Energy Reviews)*, page944.

[31] S.J. Ojolo and ors, 'Technical Potential of Biomass Energy in Nigeria', (2012) Vol. 21(2), *Ife Journal of Technology*, 60-65,

[32] N.V. Emodi and N.E. Ebele, Policies Enhancing Renewable Energy Development and Implications for Nigeria. (2017) http://www.pubs.sciepub.com/rse/4/1/2/ accessed 7 July 2025

[33]A.S. Sambo, 'Renewable energy for rural development: The Nigerian perspective'. (2009) 5, (*ISESCO Science and Technology Vision*), page. 14

[34] U. B. Akuru, &ors, 'Towards 100% renewable energy in Nigeria', (2017) (71), *Renewable and Sustainable Energy Reviews*, 943–953.

produced roughly 10 MW of wind energy. Wind speeds in the country's north, particularly in Nguru and Sokoto, are the highest, while those in the south are lower, ranging from 1.40 to 3 m/s. Additionally, it was found that for every site, the highest wind speed figure was recorded between April and August.[35]It is enough to say that Nigeria's northern region has more vast wind resources than its southern one. Given that wind energy is renewable and has a lower environmental impact than fossil fuel-based energy sources, it holds great promise for Nigeria's sustainable energy growth. Compared to conventional energy generation methods like coal or oil-based power plants, wind energy has a negligible environmental impact. When in operation, wind turbines emit no greenhouse gases or air pollutants, improving air quality and lowering carbon emissions.

d. Solar as a Source of Energy in Nigeria

The greatest promise for supplying dependable, safe, and clean electricity is found in solar energy. More than 200 times as much solar radiation reaches the Earth's land surfaces than is used annually for commercial purposes worldwide. Nigeria receives an average of nine hours of sunlight per day due to its placement in the solar belt, which equates to 5.5 kWh over two days.[36]Throughout the year, the country receives one degree of solar radiation.[37]The amount of sunlight varies throughout the nation; coastal sections receive about 3.5 hours, while far northern regions receive up to 9 hours. The southern coastal latitudes of Nigeria receive an average of 12.6 MJ/m²/day of solar radiation, whereas the extreme northern region receives an average of 25.2 MJ/m²/day. This corresponds to 18.9 MJ/m²/day of average solar power potential. Additional information is given by the Global Solar Atlas (GSA) (2021), which shows that the far south and far north have average direct normal irradiation levels of roughly 724 kWh/m² and 1653 kWh/m², respectively. This translates to PV power potential of 1248 kWh/kWp in the south and 1756 kWh/kWp in the north[38]. Nigeria receives an estimated 1500×10^9 MWh of solar radiation annually, which is significant given its total geographical area of 923,786 km². The enormous potential of solar energy in Nigeria is shown by the fact that the amount of solar energy received far above the nation's ability to generate electricity[39]. Nigeria has the capacity to produce a significant amount of solar electricity, which might be utilized to address the nation's electricity shortage, which has hindered economic growth. This takes into account both the progress of solar technologies and the availability of huge radiations. As of 2019, Nigeria produced roughly 7 MW of solar energy[40]. One of the greatest ways to support sustainable development in Nigeria is through solar energy. It is a clean and dependable energy source due to its renewable nature, wide availability, and little environmental impact. Nigeria has enormous potential for solar power generation due to its high amounts of solar radiation. Furthermore, solar energy improves energy independence and national security by reducing reliance on fossil fuels. Because of its scalability, applications may accommodate a range of energy requirements, from modest home systems to massive solar farms. For Nigeria to achieve long-term energy security and environmental sustainability, solar power is essential since it promotes clean, dependable, and equitable energy availability.

4. National Legal Framework

Nigeria's shift to renewable energy is governed by a number of laws, regulations, and policies. The main energy laws, the function of institutions, and the constraints in the legislative and regulatory frameworks controlling the growth of renewable energy are all covered in this chapter. A country's efficient utilization of its energy resources is greatly influenced by a clear and uniform legislative framework. However, the

[35] W. Olalekan, and ors, 'The Status of the Development of Wind Energy in Nigeria'(Nov. 2, 2020) *Multidisciplinary Digital Publishing Institute* https://www.mdpi.com/1996-1073/13/23/6219/pdf. accessed 7 July, 2025.

[36]O. D. Obada, 'a Review of Renewable Energy Resources in Nigeria for Climate Change Mitigation'. (2024) 9, (*Case Studies in Chemical and Environmental Engineering)* page 12.

[37] A.S. Aliyu, 'Current Status and Future Prospects Of Renewable Energy In Nigeria,' (2015) 48 *Renewable and Sustainable Energy Reviews*, 336-346.

[38]S O Oyedepo, "Energy and sustainable development in Nigeria: The way forward", (2012) 2, *Energy, Sustainability and Society*, page15

[39]*Ibid*

[40] T. Mbachu, 'Nigeria Energy Sector Overview', *United States Agency for International Development (USAID)* (March 04 2021),
https://www.usaid.gov/powerafrica/nigeria#:~:text=Nigeria%20is%20endowed%20with%20large,of%20over%20195%20million%20people. Accessed 7 July, 2025

responsible management of those resources is not guaranteed by the mere existence of such a legal framework. The power sector in Nigeria is still woefully underdeveloped and continues to impede social and economic advancement[41].Therefore, recovering the Nigerian economy and achieving the objectives outlined in the Sustainable Development Goals (SDGs) and the National Economic Empowerment and Development Strategy (NEEDS) depend on guaranteeing access to affordable and sustainable energy services. The establishment of a comprehensive and effective legislative and regulatory framework is the most crucial of several strategic tools Nigeria must employ to attain a resilient and sustainable energy future.However, in Nigeria, there is no single law which governs Renewable Energy sector, rather the legal regime is governed by a variety of laws, policies, regulations and directives.[42] This paper examines some of the existing legislative and regulatory framework that governs the growth of renewable energy projects in Nigeria. This study will include a brief summary of the main goals and policy directives contained in the Nigerian Energy Policy's current statutes, policy papers, national master plans, rules, guidelines, strategic frameworks, and incentive programs. The degree to which these legal tools contribute in the growth of the renewable energy subsector in the larger framework of Nigeria's legal and economic environment will receive special consideration. Particularly in the areas of renewable energy generation, transmission, and distribution, a clear regulatory framework is likely to attract both domestic and global businesses to collaborate with the government. More significantly, international agreements and global transformation serve as the foundation for Nigeria's and many other nations' push for renewable energy. The UNFCCC, the Paris Agreement, and the SDGs are just a few of the accords and discussions that Nigeria has ratified.

i. Constitution of the Federal Republic of Nigeria 1999 (as amended)

Although it does not specifically address energy, the Federal Republic of Nigeria's 1999 Constitution establishes the fundamental institutional and legal structure that regulates the industry. The Constitution lays out the duties and authority of the federal and state governments in relation to electricity, natural resources, and environmental protection. Nigeria's energy production, distribution, and governance are all significantly impacted by these constitutional provisions. The 1999 Constitution is the fundamental law that gives legitimacy to all other laws and regulates every element of Nigerian society, including the country's natural resources, such as renewable electricity.[43] Therefore, it states that "this Constitution will have precedence, and any other legislation will be nullified to the extent of its inconsistency" if "the contents of this Constitution are incompatible with any other law."[44]"The government will... use the riches of the country" and "manage the country's economy to ensure that every citizen has the highest possible standard of living" and "economic development," according to this clause.[45]Achieving energy security is crucial for advancing sustainability, economic growth, and human well-being, especially in the electrical sector. Therefore, these more general objectives are inextricably tied to having access to enough and dependable electricity. Therefore, it may be argued that the latter clause implies access to sufficient and dependable electricity."The state must protect and improve Nigeria's land, water, air, forest, and wildlife," the constitution further states.[46]It can be argued that the aforementioned constitutional clauses indirectly address the climate change and energy security arguments for the expansion of power generation using Nigeria's abundant renewable energy resources.[47] Regretfully, the constitutional clauses that are being examined are unenforceable. According to the constitution, the following judicial powers are granted by the preceding sections:

shall not, unless otherwise specified by this constitution, extend to any question or issue concerning whether a law or judicial decision is consistent with the Fundamental Objectives and Directive Principles

[41] A.O Musa, 'Legal Frameworks for Energy Security in Africa' (West African Energy Conference, Lagos, 2022)

[42]Andrea A. Ajibade, 'National strategies to Promote Renewable Energy Development: Wither Nigeria?' (2019)9 (1) *Journal of Sustainable Development Law and Policy*, page 81.

[43] F. Emiri and G. Deinduomo, *Law and Petroleum Industry in Nigeria: Current Challenges: Essays in Honour of Justice Kate Abiri* (Africa Books Collective 2009) 135.

[44] The Constitution of the Federal Republic of Nigeria 1999 as amended, s. 1(3)

[45]*Ibid*, s. 16(1)

[46]*Ibid*, s 20.

[47]*Ibid*, s. 16(1)

of State Policy outlined in Chapter II of this Constitution, or whether any act or omission by any authority or person is.[48]

In numerous occasions, the latter clause has been granted judicial vent, including Attorney*General of Ondo State v Attorney General of the Federation*[49]and *Okogie v Attorney General of Lagos State*[50]as indicating that the court is not permitted to consider any queries or concerns pertaining to any of the clauses found in Chapter II of the Constitution.[51]The examined provisions outlining the prerequisites for the expansion of renewable electricity are found in Chapter II of the 1999 Constitution.[52]According to the latter, the proposed framework for the expansion of renewable energy is not required nor legally enforceable. Therefore, the National and State Houses of Assembly can afford to pass laws relating to the power sector that do not have the support needed to expand the use of renewable electricity in the context of energy security and climate change mitigation. Interestingly, even while the 1999 Constitution maintained states' power to regulate electricity production, transmission, and distribution; it also significantly curtailed this authority by limiting the use of state authority over these activities to "regions without national grid coverage" within a state. The 1999 Constitution's highlighted language was intended to limit the States' use of the aforementioned powers to those regions of the States that were not connected to the national grid, while the Federal Government was supposedly able to enact laws for all regions that were. Even if they might not have legal force behind them, they could lead to the creation of policies that support renewable energy. In the case of *Shell Petroleum Development Company v Abel Isaiah*[53] where there was an oil spillage that polluted the swam of the Plaintiff/Respondent. At the time, it was only the Federal High Court that had jurisdiction over oil spillage. The Supreme Court agreed with the decision of the Court of Appeal that the High Court also has jurisdiction to entertain such actions.As a result, there is a possibility that case law will provide judicial vent and render the designated constitutional provisions legally enforceable, especially when they relate to other legislation. In addition, the 1999 Constitution grants the National Assembly the authority to enact regulations pertaining to all aspects of the electricity industry.[54]The State House of Assembly is also given the authority to enact regulations pertaining to decentralized electricity that are not previously addressed by the National Assembly. The Electric Sector Power Reform Act (ESPRA) 2005 was created by the National Assembly in accordance with its supreme authority to enact laws pertaining to the electrical sector.[55] It was replaced by the Electricity Act of 2023. The latter statute is often commended for encompassing all aspects of the power industry, including renewable energy.[56]

ii. National Energy Policy (NEP), 2003

The National Energy Policy is the first comprehensive energy policy in the country. Before the energy strategy was approved in 2003, the Federal Government of Nigeria had separate policy documents for each of the energy sub-sectors, which included electricity, gas, solid minerals, and oil, but no renewable energy[57]. The National Energy Policy is Nigeria's initial effort to incorporate renewable energy as a source of energy[58]. The Energy Commission of Nigeria (ECN), which developed the policy and is responsible for organizing the energy sector's operations. The policy paper lists the renewable resources that are now in the nation in practical amounts, include biomass, wind, solar, hydro, and hydrogen, and it

[48]*Ibid*, s. 6(6) (C)
[49][2002] 9 NWLR (pt. 772)
[50] [1981] NCLR 2187
[51] O. VC Ikpeze, Non-Justiciability of Chapter II of the Nigerian Constitution as an Impediment to Economic Rights and Development‟ (2015) 5(18) *Developing Country Studies*. 50.
[52] P. K. Oniemola, „Why Should Oil Rich Nigeria Make A Law for the Promotion of Renewable Energy in the Power Sector? (2016) 60 (1) *Journal of African Law*. 35- 39.
[53](2001) 5 S.C (Pt11)1
[54] The 1999 Constitution, Second Schedule, Part 11, Item 13, Yemi Oke, "Challenges and Development in the Nigerian Power Industry" (2014) *ALP Business Review-Energy*. 25-31.
[55] N. Nelson, „National Energy Policy and Gas Flaring in Nigeria‟ (2015) 5(14) *JEES* 58.
[56] Lagos State Ministry of Energy and Mineral Resources, *Consultation Document for the Development of a Renewable Energy Policy* (Lagos State Ministry of Energy and Mineral Resources 2012) 11.
[57]T. Sesan, "Status of Renewable Energy Policy and Implementation in Nigeria," paper delivered at University of Nottingham (unpublished) in 2008), >www.gbengasesan.com/temidocs/Repstatus.Nigeria pdf. >accessed 28 July, 2025.
[58]N.V. Emodi, & N.E. Ebele, "Policies Enhancing Renewable Energy Development and Implications for Nigeria," (2016) 4 (1), *Sustainable Energy Journal (Open Access)*. 7-16.

outlines how to use them for the sustainable development of the country. The following relevant ideas and regulations are outlined in the National Energy Policy, with special reference to renewable energy:

a) identification of renewable energy sources that the country may use in an environmentally responsible way, including nuclear, biomass, wind, solar, hydro, and hydrogen.
b) Local research, development, and exploitation of the previously indicated energy potentials will be conducted for commercial objectives through collaboration between the public, private, and indigenous sectors.
c) Non-renewable energy sources should be utilized sparingly even if Nigeria plans to guarantee that by 2020, at least 75% of the population always has access to power at affordable costs for social, industrial, and economic activities, and
d) Energy-related initiatives and activities from various sectors must be incorporated into an integrated energy planning framework[59]

Among the earliest energy policies that directly affected renewable energy and aimed to diversify Nigeria's energy sources were the National Energy Policy and the National Renewable Energy Policy. It contained particular clauses for a variety of renewable energy sources, such as tax breaks, feed-in tariffs, financing options, and aid initiatives.[60]Nevertheless, the National Energy Policy's goal of developing a cleaner and more sustainable energy source for the country did not specifically address how to use them, their percentage contribution to that mix, or their periodic targets for the country's overall energy mix. Notwithstanding these drawbacks, it raised awareness and also served as a blueprint to foster a robust energy supply mix through the principle of energy diversification.[61]

iii. National Economic Empowerment and Development Strategy (NEEDS), 2004

To combat poverty in the nation, the National Planning Commission (NPC) created the National Economic Empowerment and Development Strategy (NEEDs) in 2004. Supporting a higher share of renewable energy sources in the nation's energy mix, privatizing public infrastructure, and using natural resources to satisfy local economic demands are all objectives of the National Economic Empowerment and Development Strategy.[62] Additionally, by promoting Nigerians' access to energy resources, the NEEDs initiative raised the proportion of renewable energy in the country's energy mix. However, the goal and vision of the NEEDs program have not been implemented in any manner.[63] Funding for the renewable energy agency and technology came from the National Power Sector Reform Act of 2005, which was repealed by the Electricity Act of 2023.Unfortunately, the National Economic Empowerment and Development Strategy (NEEDS) neglected to take into account the cost of grid connection and acknowledge renewable energy as a crucial pathway for providing rural areas with sustainable power for their economic operations. Additionally, it neglected to emphasize the importance of renewable energy in achieving the country's sustainable growth in accordance with international trends. Increasing awareness of the importance of renewable energy as a vital energy source, particularly in rural areas, is its main contribution to Nigeria's renewable framework design.

iv. Renewable Energy Master Plan (REMP), 2005

The Renewable Energy Master Plan (REMP) defined a feasible road map for a sustainable future by outlining plans for the country's renewable energy resources. The United Nations Development Programme (UNDP) and the Energy Commission of Nigeria (ECN) worked together to create REMP[64]. Implementing the policy is the responsibility of the Ministry of Environment. The document outlines Nigeria's goal of achieving sustainable development. Prioritizing renewable energy is one way to achieve

[59]National Energy Policy (NEP) (2003). Energy Commission of Nigeria (ECN). Abuja: Federal Republic of Nigeria, Available online at www.energy.gov.ng,<accessed 28 July, 2025.
[60]*Ibid.*
[61]L. Atsegbua, Introduction - paradigm shift: from fossil fuels to renewable energy. In L. Atsegbua & S. Daudu (Eds), Beyond fossil fuels: renewable energy-law and policy (pp. 1-5). (Benin City: Fifers Lane Publishers2019). Page 313.
[62] N. Ebele, & N. Emodi, "Climate Change and Its Impact in Nigerian Economy", (2016) (10), *Journal of Scientific Research and Reports*. 1-13.
[63] S. C. Dike, & P. G. Gininwa, 'Appraising Nigeria's Renewable Energy Sector for Sustainable Development', (2018) 5(2), *Journal of Public Law*, 125.
[64] N. Ebele, & N. Emodi, "Climate Change and Its Impact in Nigerian Economy", (2016) (10), *Journal of Scientific Research and Reports*. Page 8

sustainable development.[65] The National Economic Empowerment and Development Strategy (NEEDS), National Energy Policy, National Policy on Integrated Rural Development, the now-defunct Millennium Development Goals (MDGs), and the International Conventions to Reduce Poverty and Reverse Global Environmental Change serve as the foundation for the Renewable Energy Master Plan[66]. REMP describes the required programs and activities for every economic sector, as well as methods for funding support, cooperation, and implementation. Timelines for accomplishing these objectives are also included, divided into three phases: short-term (2006–2009), medium-term (2010–2015), and long-term (2016–2030)[67]. Although the Renewable Energy Master Plan was supposed to guarantee a supervised implementation of NEP, it lacked concrete directives on how to achieve the targets and was insufficiently detailed to clearly state the mandates and targets for each development stage. Therefore, in the absence of particular legislation that can lead to its implementation, it remains a bulldog without teeth.

v. Captive Energy Generation Regulations (CEGR), 2008

The Nigerian Power Regulatory Commission (NERC) issued CEGR in 2008 to regulate captive power production for small or private use.[68]The National Electricity Regulatory Commission (NERC) released these rules in addition to the EPSRA. The Act has no comprehensive provisions pertaining to the regulation of small-scale energy production for home or commercial use. However, it grants the commission the power to promulgate regulations concerning this kind of captive generation. The regulations describe captive power generation as producing more than one megawatt of electricity for the generator's own consumption only, without selling it to a third party.[69]Although it mostly applies to small generators or captors, its concepts are comparable to those of general rules.[70] The rules apply to captive renewable energy producing projects even if they are not specific to renewable energy. The regulations primarily outline the process for applying for, renewing, and canceling a captive generation permit. They also include the transfer of power exceeding 1MW from a captive permit holder to an off taker and the data that captive generators provide to the commission.

vi. National Biofuels Policy and Incentives, 2007

The Nigerian National Petroleum Corporation (NNPC) started it. On June 20, 2007, the Federal Executive Council approved the policy. It creates a Bio-fuel Research Agency and the Bio-fuel Energy Commission to carry out studies for the best possible biofuel production.[71]The main goal of the policy was to use agricultural products to grow and support the domestic fuel ethanol industry. This was in line with the government's August 2005 resolution about Nigeria's Automotive Biomass Program. The NNPC was tasked with fostering an atmosphere that would allow the ethanol business to flourish. Offering incentives to investors is a crucial part of the policy.[72]The initiative also sought to reduce environmental pollution and the country's reliance on imported gasoline over time, all the while developing a profitable sector that may lead to long-term, stable jobs in the country.[73]The benefits of the policy included increased tax income, rural community empowerment, economic development, improved agricultural practices, and improved energy and the environment through a reduction in greenhouse gas emissions associated with fossil fuels in the transportation sector. The policy supports the regulatory environment for renewable

[65] O. L. Omoregie, "Fostering Sustainabiity through Renewable Energy Resource Development: The Law and Policy in Nigeria", (2020), *The IAFOR International Conference on Sustainability, Energy & the Environment Hawaii*. 6

[66] N. Ebele, & N. Emodi, "Climate Change and Its Impact in Nigerian Economy", (2016) (10), *Journal of Scientific Research and Reports*. 8

[67]T. H. Odugbemi, "Advancing Renewable Energy Solutions for Sustainable Development in Nigeria: Challenges, Opportunities, and Policy Implication (2025) page 10. http://dx.doi.org/10.2139/ssrn.5097973. Accessed on 6th August, 2025

[68] I. Aye, & Ors, 'The Renewable Energy Law Review: Nigeria,' *The Law Reviews* https://thelawreviews.co.uk/title/the-renewable-energy-law-review/nigeria#footnote-047>accessed 20 July, 2025)

[69] Captive Energy Generation Regulations. s 2, available online at www.nercng.org/nercdocs/Regulation-for-Captive-Power-Generation.pdf<accessed 20 July, 2025.

[70] Captive Energy Generation Regulations, 2008, s2, Policy Document, 2008 (Nigeria)

[71] Federal Republic of Nigeria. (2007). Official gazzette of the Nigerian bio-fuel policy and incentives. Abuja: Federal Republic of Nigeria

[72] O. V. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects,' (2017) 1 (1) *Unilag Law Review*. 6

[73] P.K Oniemola and G. Sanusi "The Nigerian Biofuels Policy and Incentives (2007): A Need to Follow the Brazilian Pathway", (2009) *International Association of Energy Economics*, 35, <https://www.iaee.org/en/publications/newsletterdl.aspx?id=88 >accessed 20 July, 2025.

energy through the establishment of a Biofuels Commission, the issuance of a Biofuels regulation by the Minister of Petroleum Resources, the establishment of a Biofuels Research Agency, the funding of Biofuels Development Research and Development, and an incentive program for those engaged in the Biofuels Development subsector.[74]The policy's shortcomings include its inability to pinpoint ways to transfer technology, its lack of implementation because the commission it aims to create has not yet been constituted, and the apparent hijacking of its function by the Energy Commission of Nigeria's overlapping framework.

vii. National Renewable Energy and Efficiency Policy, 2015

On April 20, 2015, the Federal Executive Council (FEC) approved the National Renewable Energy and Energy Efficiency Policy (NREEEP) as a policy document[75]. It is the first and only coordinated tool in Nigeria to increase energy efficiency and encourage the expansion of renewable energy sources[76]. The National Grid's limited reach is acknowledged in the policy, which sees renewable energy as the best means of bridging the gap. In addition to establishing the implementation timeframe, it requires the creation of the National Renewable Energy Action Plan (NREAP) and the National Energy Efficiency Action Plan (NEEAP). Within the energy value chain, the National Renewable Energy and Energy Efficiency Policy (NREEEP) outlines the global drive to promote renewable energy and energy efficiency. The NREEEP, which provides for both on- and off-grid projects, has been the most comprehensive and encompassing of all Nigeria's renewable energy policies. It provides sufficient and detailed provisions for the various renewable energy policies to be implemented, and it also includes provisions for energy efficiency measures as a way to do this[77]. According to the policy, the Ministry of Power must facilitate the development of an Integrated Resource Plan (IRP) and provide continuous monitoring and assessment of the effectiveness and implementation of the agreed-upon action plans. It facilitates Nigeria's establishment of a framework for sustained financing of renewable energy and energy efficiency initiatives. It solely concentrates on energy generation from geothermal, wave, tidal, biomass, solar, wind, and hydropower sources. The policy predicts a national generating profile of 6,156MW and 12,801mw of hydropower, 631MW and 3,211mw of wind energy, 3.4MW and 11.7mw of biomass power, and 1343MW and 6,831MW of solar power between 2020 and 2030[78]. Finally, it requires the government to offer financial frameworks and assurances to support the growth of Nigeria's market for renewable electricity.[79]The NREEP offers financial assistance and incentives, lowers taxes on investments in renewable energy, and fosters an inviting atmosphere for investors[80]. However, it prioritizes the market for power over the advancement of renewable energy.

viii. Energy Commission of Nigeria Act (ECA)[81]

The Energy Commission of Nigeria (henceforth referred to as the Commission) was established by the Act, which was amended in 1988 and 1989 after it was first enacted in 1979. The Commission is tasked by the Act with overseeing and managing the systematic development of Nigeria's diverse energy resources. The Technical Advisory Committee[82] the Act mandates that the Commission carry out the following tasks, among others:

a) Compile and distribute information about the government's energy development policy.
b) act as a hub for technical troubleshooting in the energy development industry.

[74]Nigerian National Petroleum Corporation (NNPC) Draft Nigerian Bio-Fuel Policy and Incentives. Nigerian National Petroleum Corporation, Abuja. 2007

[75]O. V. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects,' (2017) 1 (1) *Unilag Law Review 1*. Page 35.

[76]*Ibid*

[77]S. C. Dike, & P. G. Gininwa, 'Appraising Nigeria's Renewable Energy Sector for Sustainable Development', (2018) 5(2), *Journal of Public Law*, 128.

[78]Energy Commission of Nigeria & Federal Ministry of Science and Technology. (2014). *National renewable energy and energy efficiency policy*. Abuja: Federal Republic of Nigeria.

[79]National Renewable Energy and Energy Efficiency Policy for Nigeria 2015, available online at www.energy.gov.ng>accessed 18th July, 202v5.

[80] National Renewable Energy and Energy Efficiency Policy (NREEEP) (2014). Energy Commission of Nigeria (ECN) and Federal Ministry of Science and Technology (FMST)

[81] CAP E10, LFN 2010.

[82]Energy Commission of Nigeria Act. s 3

c) Give advice to the federal and state governments regarding energy development issues, such as funding energy research and development; and

d) Establish comprehensive plans and regulations for the production, exploitation, and use of energy as well as for project management, funding, incentives, and government suggestions.

e) Keep in touch with all international organizations that address energy-related matters, such as the International Atomic Energy Agency and the World Energy Conference.[83]

The Act sought to protect the environment from the damaging effects of fossil fuels while bringing government policies pertaining to the creation, use, and distribution of renewable energy sources into harmony[84]. The Act makes no mention of the development of renewable energy.

ix. The Electricity Act of 2023

On June 8, 2023, the Electricity Act, 2023 (the Act) was signed into law by President Bola Tinubu[85]. Nigeria's National Renewable Energy and Energy Efficiency Policy (NREEEP) 2014 highlights the country's aims for renewable energy, including incorporating it into its energy mix, the Nigerian Energy Transition Plan, the Rural Electrification Agency National Renewable Energy Master Plan (REMP) (2012), and the National Energy Policy (NEP) 2022. The Electric Power Sector Reform Act 2005 (EPSRA) is repealed by the Act, which also aims to unify Nigerian electricity legislation and policy documents along the whole value chain of the country's power sector. Additionally, the Act aims to increase state government participation in the power sector and private sector investment[86]. A comprehensive law on the power sector, the Electricity Act, 2023, repeals all previous laws in the electricity sector and establishes a regulatory and institutional framework for the production, transmission, distribution, and supply of electricity as well as the protection of consumer rights.[87] The Act includes provisions to encourage the production of renewable energy, mostly through domestic initiatives, in relation to the energy transition.[88]One of the main features of the Act is the decentralization of electricity production, transmission, distribution, and supply within the federation. Legislation governing the operation of their states' power markets in compliance with the Act's requirements is expected to be passed by state houses of assembly. The federal laws governing the operation of electrical activities will still be applicable in states without any legislation. According to section 2's stipulations,[89]Participation in the energy market is authorized for both governmental and private entities. Additionally, it decentralizes power generation by giving states the authority to grant licenses for the production, transmission, distribution, supply, and system operation of electric power within their borders.[90] By allowing anyone to produce up to one megawatt of electricity without a license, the act further encourages independent power generation. Additionally, it states that licenses to run mini-grids inside a state but not across state lines or internationally may be provided to people.[91]Although it is not necessary, using renewable energy sources should be considered when granting licenses.[92] The Act also seeks to increase the proportion of renewable energy in Nigeria's overall energy mix by promoting the development and use of renewable energy sources and fostering an atmosphere that would attract investment in them.[93] In keeping with Nigeria's commitment under the Paris Agreement, the Act prioritizes the production and use of renewable energy sources and recognizes the importance of clean energy sources. Since Part XVI seeks to electrify and provide affordable, sustainable energy to underserved, rural, and unserved areas of the country, it is essential to the implementation of SGD7.[94]Promoting off-grid electrification and the utilization of

[83]*Ibid*, s 5

[84] O. V. Ojo, 'An Overview of the Legal and Regulatory Framework for Renewable Energy Projects in Nigeria: Challenges and Prospects,' (2017) 1 (1) *Unilag Law Review*. 6

[85]https://investmentpolicy.unctad.org/investment-policy-monitor/measures/4339/nigeria-electricity-act-2023-liberalizes-the-sector-and-promotes-renewables. accessed on 13th September, 2025

[86]https://ng.andersen.com/overview-of-the-electricity-act-2023-implications-and-opportunities-for-investors/

[87]Electricity Act, 2023

[88]*Ibid* S.1

[89]*Ibid*.

[90]*Ibid*, S. 63(1) and (7)

[91]Electricity Act, 2023. S 63(2)

[92]*Ibid*, S 80 (2)

[93]https://ng.andersen.com/overview-of-the-electricity-act-2023-implications-and-opportunities-for-investors/ accessed 17th July, 2025

[94](N51). S.128 and 129

renewable energy sources is the responsibility of the Rural Electrification Agency, the proper agency. Although the Act expressly calls for a sustained reliance on electricity produced by fossil fuels, it seeks to increase and encourage the use of renewable energy. Section 164(a)[95]simplifies the licensing application procedures for renewable energy-based services. Additional incentives are also provided by the Act, such as advantageous pricing conditions, unrestricted access to the national grid and distribution network, feed-in tariffs for renewable energy-generated electricity that ensure a profit, exclusive concessions to service-specific regions, and other concessions to ease business operations.[96] Furthermore, section 166[97]include specific tax incentive clauses to promote the generation and consumption of electricity derived from renewable sources. It is anticipated that in order to accomplish this goal, the Commission will grant mini-grid concession licenses to renewable energy firms, allowing them to generate and distribute electricity exclusively in specific geographic areas. It is anticipated that this will draw more investments into the power sector, improve energy access, and result in more reasonably priced renewable energy generators and products. According to the Act, the Ministry of Finance must put into effect any tax breaks that would be necessary to encourage and facilitate the production and use of power from renewable energy sources.[98]The Commission is also expected to develop regulations pertaining to the costs and operations of renewable energy in Nigeria. According to the Electricity Act of 2023, the feed-in tariff rates would be determined by the Nigerian Electricity Regulatory Commission for a specific time frame.[99]Although the nation recently passed the Climate Change Act of 2021, it is observed that such comprehensive legislation does not address concerns of energy efficiency, sustainable energy use, or climate change mitigation. An efficient renewable energy strategy requires a legally supported stance on sustainability and energy efficiency.[100]Moreover, although the Act offers a renewable energy path, this is not one of its stronger features. The purpose of the law should be to influence and advocate for sustainable energy habits among the populace. When used as a social engineering instrument, the law must benefit people's social and economic well-being in terms of energy security and safeguard their interests and welfare over the long run[101]. The new Electricity Act's provisions granting the States authority are praiseworthy since they represent a tangible legislative step to guarantee energy security and encourage the switch to renewable energy. As the federal government provides general energy guidelines or a framework for the nation, it fosters "cooperative federalism," eliminates the problems of centrality and a top-to-bottom approach, and empowers individual states to develop energy conservation, renewable energy, and clean energy initiatives.[102]

x. Petroleum Industry Act (PIA) 2021[103]

This is Nigeria's main law governing oil and gas operations. The primary objective of the Act is to restructure and transform Nigeria's oil and gas industry. The Act provides a legal governance, regulatory, and financial framework for the Nigerian oil and gas industry as well as the expansion of petroleum host towns. It guarantees sustainability, environmental preservation, and public safety. The PIA has established two regulators, each with distinct jurisdiction over operations upstream, midstream, and downstream. The new regulators are as follows:

(a) the Nigerian Upstream Regulatory Commission[104], this takes the place of the current Department of Petroleum Resources and is in charge of regulating the upstream petroleum operations' technical, operational, commercial, and environmental activities and

[95]*Ibid*, S 164(a)
[96]*Ibid*. S.164(1).
[97]*Ibid.*
[98]https://ng.andersen.com/overview-of-the-electricity-act-2023-implications-and-opportunities-for-investors/accessed 17th July, 2025
[99] Electricity Act, 2023. S.168-170
[100] J. Setiyono, & Ors, 'Renewable Energy Regulatory Urgency in Global Energy Security,' (2023), *IOP Conference Series: Earth and Environmental Science*, 1270(1), 012021. https://doi.org/10.1088/1755-1315/1270/1/012021accessed 17th July, 2025
[101]Setiyono, & Ors (n 50)
[102] A. R. Lucas, & C. B Thompson, *Transition to a Low-Carbon Energy Economy*, (Oxford University Press 2018) (1). https://doi.org/10.1093/oso/9780198822080.003.0003accessed 17th July, 2025.
[103] Cap P10 LFN 2004
[104]Petroleum Industry Act PIA 2021, S.4

(b) the Nigerian Midstream and Downstream Petroleum Regulatory Authority[105], it will be responsible for licensing petroleum and gas operations in the midstream and downstream areas and establishing pricing and tariff arrangements for natural gas and petroleum products.

Under the Petroleum Industry Act of 2021, the Nigerian National Petroleum Corporation was replaced by the Nigerian National Petroleum business Limited (NNPC Limited), a limited liability business that is currently an independent national oil firm[106]. The Nigerian government owns the recently created NNPC Limited, a private company, but it is meant to function as a stand-alone business. In all production sharing, profit sharing, and risk sharing agreements, NNPC Limited will act as the concessionaire on behalf of the Nigerian government. Better rules and incentives for gas investment are also offered under the Petroleum Industry Act (PIA 2021), this provides tax holidays of up to ten years and extends incentives to midstream gas companies.[107]The clause in section 64(h) that states that NNPC Limited must compete with private investors in the development of renewable resources is the part of this work that is of interest. But in a period where decarbonization is a worldwide requirement, in response to worldwide demand, the PIA did not promote opposition to fossil fuels or put measures in place to transition from fossil fuels to clean, renewable energy. The Ministry of Finance had control over the tax structure and incentives included in PIA. Therefore, the Executive Director of the Commission may use his discretion to reject incentives to promote development if he is not in favor of the development of renewable resources. This is one of the PIA's main weaknesses.

xi. The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007

The National Environmental Standards and Regulations Enforcement Agency (Establishment) (NESREA) Act 2007[108]was enacted to address today's environmental problems and safeguard the environment everywhere, including the energy sector.[109]The Federal Environmental Protection Agency (FEPA) Act was replaced by this Act, which contains the laws and regulations about the conservation and sustainable development of the environment and its natural resources. The Act consists of six sections;

a. The National Environmental Standards Regulation and Enforcement Agency's goals are outlined in Part I, which also creates the Agency's governing Council, term, and remuneration.
b. Part II outlines the authority of the agency, its functions, and the council's functions. The Agency's Directorates are established in Part III.
c. The appointment of the Agency's director general and employees is covered in Part IV.
d. Part V addresses the agency's budget and establishes national environmental standards.

Noticeable, section 27 of NESREA[110] prohibits the discharge of hazardous substances into the environment unless a good justification is given. This paragraph states that the maximum penalty for the infraction is either a fine of N1,000,000.00 (one million naira) or a maximum jail sentence of five years. For each day the offense is committed, a corporation faces an extra fine of N50,000.00. The act established several measures to stop environmental harm. According to the law, careless disposal of renewable energy sources will result in penalties.

xii Environmental Impact Assessment

The Environmental Impact Assessment Act mandates environmental studies for energy projects and other projects that could have significant environmental impacts[111]. It ensures that energy development aligns with environmental sustainability goals. The Federal Military Government revised the Act with decree No. 86. The Act's goals and objectives are outlined in Section 1 as follows: The objectives of any environmental impact assessment, which is henceforth referred to as the Assessment, are -

a) Any person, organization, corporation, or unincorporated body including the federal, state, or local governments that intends to do or approve the execution of any activity that could potentially or

[105]*Ibid*, S.29
[106]Petroleum Industry Act PIA 2021, S.53
[107]Companies Income Tax Act (the CITA), S. 39.
[108] The National Environmental Standards and Regulations Enforcement Agency (Establishment) (NESREA) Act, No 25, 2007,
[109] The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, s 2.
[110]The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007. S. 27
[111]I, O. Bello, 'Examination of the Recent Cases, New Regulations and Legislations in Renewable Energy in Nigeria'. (2024) *Faculty of Law, Lead City University, Ibadan, Oyo State, Nigeria*. Page 9.

significantly impact the environment or have an impact on those activities must first consider the environmental implications of those activities.

b) To encourage the application of suitable policies in all States and Local Government Areas on Federal Lands (however obtained), Any person, organization, corporation, or unincorporated body including the federal, state, or local governments that intends to do

c) To encourage the development of procedures for alerting, consulting, and exchanging information between organs and people in cases where planned actions are expected to significantly affect the environment of neighboring towns and villages, the border, or the trans-state.[112]

The Act lays out the fundamental ideas, steps, and techniques that allow environmental impact assessments to be taken into account before moving forward with specific public or private projects.

xii. Climate Change Act

One important piece of legislation designed to address the various issues raised by climate change in Nigeria is the Climate Change Act 2021.[113] The Act aims to advance sustainable development by boosting renewable energy sources in a country that is struggling with the negative effects of climate change, such as environmental deterioration and severe weather events. Nigeria's new Climate Change Act largely consists of expansions of previous climate change regulations, most of which were passed in 2021.These policies include the Revised National Climate Change Policy, national climate change programs, the 2050 Long-Term Low Emission Vision, and the First Nationally Determined Contribution. The law is West Africa's first complete, independent law addressing climate change[114]. Nigeria's Climate Change Act provides a bold framework for mainstreaming climate measures in line with the country's development goals and sets a net-zero goal for 2050–2070[115]. In order to codify national climate policies, according to the Act, the Ministry of Environment must set a carbon budget, aim to restrict the increase in global temperatures to 1.5 degrees Celsius over pre-industrial levels, and limit the average increase to 2 degrees Celsius. Additionally, the Act creates and authorizes the creation of a National Climate Change Action Plan[116]every five years to ensure that the nation's emission profile is in line with the carbon budget targets and to provide methods for identifying projects related to climate adaptation and mitigation. The Act mandates that public and commercial entities functioning within Nigeria's boundaries establish mechanisms aimed at advancing environmental sustainability, climate resilience, and a low-carbon society[117].In addition to implementing strategies to meet the Action Plan's annual carbon emission reduction targets, the Act requires any private organization with 50 or more employees to designate a climate change officer who will provide annual reports to the National Climate Change Secretariats on the organization's climate adaptation and carbon emission reduction plan. The National Council on Climate Change is also established by the Act[118], headed by the president of Nigeria and comprised members of civil society, women, youth, and persons with disabilities, as well as leaders from the commercial and public sectors.[119]It grants the Council extensive authority to organize national climate initiatives, manage the newly established Climate Change Fund, generate funds to support climate activities, and collaborate with the Nigerian Sovereign Green Bond in order to meet Nigeria's NDC[120]. Prioritized climate initiatives and interventions are intended to be financed through the Climate Change Fund. Adoption and promotion of nature-based strategies to reduce GHG emissions and slow down climate change are strongly encouraged.[121]The Act also supports Nigeria's obligations under global climate accords, including the Paris Agreement, this requires a transition to a low-carbon economy and a reduction in greenhouse gas

[112] Environmental Impact Assessment Act 1992, Decree No. 86, s 1 (a) - (c).
[113]Climate Change Act, 2021 (Act No. 11 of 2021)
[114]https://iucn.org/news/commission-environmental-economic-and-social-policy/202203/a-review-nigerias-2021-climate-change-act-potential-increased-climate-litigation. Accessed on 6th August, 2025
[115] Climate Change Act, 202, s 1(f)
[116]*Ibid*,S. 1(i)
[117]*Ibid*,S. 19.
[118] Climate Change Act, 2021. S. 3
[119]*Ibid*,S. 5
[120]*Ibid*,S. 4
[121]*Ibid*, S. 22

emissions.[122] The Council has the power to impose obligations on public and commercial entities relating to climate action. The Climate Change Act 2021 aims to solve these issues by establishing a legislative framework for the development of renewable energy technology. This enables Nigeria to meet its short, medium, and long-term climate adaptation and mitigation goals.[123] In particular, the duties placed on public and commercial enterprises to support sustainable livelihoods and a low-carbon economy, as well as the responsibility of the Council and its Secretariat to work with relevant parties, including civil society organizations. These actions offer a strong legal basis for future climate-related lawsuits. The Act makes it possible to file a claim against the Council for possibly failing to regulate violations and penalties for non-compliance with the new law's climate obligations against any individual, business, or government body that behaves in a way that undermines the Act's mitigation and adaptation efforts. The results show that Nigeria's renewable energy industry could make great strides thanks to the Climate Change Act 2021. The Act promotes investments in renewable energy technology, which are crucial for lowering greenhouse gas emissions and advancing environmental sustainability, by offering a clear policy direction and financial incentives. The governance framework necessary for the effective implementation and supervision of renewable energy projects is strengthened by the establishment of a dedicated Climate Change Council. However, obstacles still exist in the form of poor infrastructure, a lack of funding, a lack of knowledge about the advantages of renewable energy, and a lack of technical capability, all of which could make it more difficult to achieve its lofty objectives[124]. Furthermore, the majority of Nigeria's energy comes from fossil fuels, which exacerbates environmental degradation and raises greenhouse gas emissions.[125]Relationships and coordination between the corporate sector and the federal, state, and local governments are inadequate. Therefore, continuous stakeholder engagement and capacity-building initiatives will be needed to ensure that the benefits of renewable energy are equitably shared among all population segments. The Climate Change Act 2021 is a significant step in Nigeria's efforts to promote renewable energy. By establishing a legislative framework that prioritizes environmental sustainability and offers incentives for investments in renewable energy, the Act has the potential to completely transform Nigeria's energy landscape. However, if the Act is to achieve its intended goals, it is imperative that existing problems be resolved and that all parties concerned cooperate. The successful implementation of the Climate Change Act will enhance energy security and promote sustainable development in addition to assisting Nigeria in meeting its climate goals.

xiv. Local Content Development Act

Incorporating local labor, materials, and services into the production process is known as "local content." The world urgently needs to switch to renewable energy sources in order to fight climate change and guarantee sustainable development. The Local Content Development Act (LCDA) is necessary for Nigeria, a country abundant in renewable energy resources, to grow its renewable energy sector. While the 2010 Local Content Development Act was enacted to encourage more local participation in the oil and gas sector, the renewable energy industry can benefit from its concepts as well. The Nigerian Content Development and Monitoring Board (NCDMB), however, has pledged to alter this perception.[126] By promoting innovation, improving skills, and creating jobs, these local content policies can boost economic growth.[127] When it comes to renewable energy, local content can help advance homegrown technologies and reduce need on imports[128]. Regulations for local content regulations are crucial to the development of renewable energy in Nigeria because they ensure that local communities and companies benefit from the growth of the renewable energy sector. The Nigerian government has implemented

[122] O. Ogunleye, 'Nigeria's Climate Change Commitments and the Role of Renewable Energy', (2021) 13(2), *International Journal of Climate Change Strategies and Management*, pages 123-139.

[123]https://foundationchambers.com/climate-change-act-2021-the-highlights/. Accessed on 17th August, 2025

[124]J. O. Olusola, and O. S. Ikiyouleimo,'Strategic evaluation of the 2021 Nigeria Climate Change Act: Surmounting challenges, paving the way for success, and envisioning future trajectories' (2024) *Social Sciences & Humanities Open 10*. Page 6.

[125] O. Akinwumi, A. Adeyemi, & Ojo, J. 'The Impact Of Climate Change on Nigeria's Energy Sector: A Review', (2020) *Journal of Environmental Management*, 265.

[126] Nigerian Oil and Gas Industry Content Development Act. S. 4.

[127]J. Ojo, 'Local content development in Nigeria's energy sector: A pathway to sustainable development', (2019) 5(1), *Nigerian Journal of Energy Studies*, 15-29.

[128]O. Akinyemi & J. Ojo, 'The role of local content in the renewable energy sector: A case study of Nigeria', (2020) 10(4), *International Journal of Renewable Energy Research*, 123

several regulations, including requiring companies to prioritize locally produced goods and services, in an effort to increase local participation in the renewable energy sector.[129] The Nigerian Renewable Energy Master Plan (REMP) sets targets for increasing the share of renewable energy in the country's energy mix and encourages the domestic manufacture of renewable energy technology.[130] Furthermore, the Electricity Act 2023, which repealed the Electric Power Sector Reform Act (EPSRA) of 2005, has improved the framework for private sector participation in the renewable energy sector, particularly for local enterprises. One advantage of local content policies in renewable energy is that they may encourage more investment in renewable energy infrastructure, which would improve rural communities' access to energy. Additionally, including local content into renewable energy projects can encourage societal acceptance and community involvement, both of which are essential for the successful execution of such programs.[131]Regulations pertaining to local content also encourage technology transfer and capacity creation in the field of renewable energy. For example, businesses in the industry must offer training and capacity-building initiatives to their local employees.[132] According to the Act, Nigerians on the work program for which the proposal was submitted shall be given preference for training and employment.[133]Additionally, local content laws can support job creation and economic expansion in nearby regions. However, issues like unclear local content criteria and insufficient enforcement make local content laws in Nigeria's renewable energy sector less effective,[134]efficient application of local content regulations. Problems including poor infrastructure, restricted access to funding, and regulatory obstacles may prevent the LCDA's goals from being fully achieved[135]. The Local Content Development Act has the potential to significantly alter Nigeria's renewable energy sector. The LCDA may support the nation's economic growth and energy security by encouraging local involvement, improving technological transfer, and generating employment opportunities. However, coordinated efforts are required to solve current issues and encourage a cooperative approach among stakeholders if the Act is to provide the desired results. The Nigerian government must fortify the regulatory framework and offer precise recommendations regarding the requirements for local content in order to overcome these obstacles. Additionally, local content laws can promote the growth of specific renewable energy sources, such as wind and solar power.[136]The Nigerian government can develop a more egalitarian and sustainable renewable energy sector that helps local populations by giving priority to local content.

5. International Legal Framework

The international legal framework for renewable energy is determined by the treaties, agreements, rules, and institutional processes that guide global cooperation in the advancement of sustainable and clean energy sources. It combines the tenets of international environmental law, climate change accords, and sustainable development commitments - especially those found in the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement - to encourage governments to enact laws that boost the use of renewable energy sources, reduce greenhouse gas emissions, and enhance energy efficiency. Some of the international instruments and African Charter that are relevant to the development of renewable energy are hereunder discussed:

i. The Kyoto Protocol

The Kyoto Protocol was adopted on December 11, 1997, and it became operative on February 16, 2005. The Kyoto Protocol is a great example of external and institutional pressure on organizations. The treaty calls on nations to develop their plans to cut carbon emissions in line with its objectives, which has increased pressure on public and private organizations to fulfill these goals[137]. Developed nations are

[129] A. Adeniran, "Local Content Regulations in Nigeria's Renewable Energy Sector" (2020) *Journal of Energy Law*.

[130] I. M. Ajogwu, 'Renewable Energy and Local Content: A Review of Legal and Policy Initiatives' (2025) 2 (1) *Journal of Law and Intellectual Property Rights.* 25.

[131] M. Nwafor, & A. Okwu, 'Community engagement in renewable energy projects: The role of local content in Nigeria', (2020) 11(2), *Energy Research Journal*, 45-58.

[132] S. Okonkwo, "Technology Transfer and Capacity Building in Renewable Energy" (2020) *Journal of Renewable Energy.*

[133] Nigerian Oil and Gas Industry Content Development Act. s 10.

[134] A. Ogbuigwe, "Challenges and Opportunities in Nigeria's Renewable Energy Sector" (2020) *Journal of Energy and Environmental Law.*

[135] M. Nwafor, & A. Okwu, 'Community engagement in renewable energy projects: The role of local content in Nigeria', (2020) 11(2), *Energy Research Journal,* 50.

[136] E. Eke, "Promoting Local Content in Solar Energy Development in Nigeria" (2021) *Journal of Solar Energy Law.*

[137] B.G. Rabe, 'Beyond Kyoto: Climate change policy in multilevel governance systems', (2007), 20 (3), *Governance'.* 423–444.

expected to regulate and reduce greenhouse gas (GHG) emissions under individually agreed objectives based on Kyoto's standards. International commitments include lowering greenhouse gas emissions and preparing for climate change[138]. The Kyoto Protocol, which only applied to industrialized nations, established legally bound emission-reduction objectives, marking a major turning point in global climate governance. From 2000 to 2015, the Kyoto Protocol's adoption significantly benefited the growth of renewable energy in around 29 developed nations[139]. This illustrates how the ramifications of the Kyoto Protocol accelerated the growth of renewable energy in Central Asia, the Caucasus, and Central and Eastern Europe[140]. Energy transition is positively impacted by the Kyoto Protocol, which implies that industrialized nations are encouraged to enhance environmental quality. International climate change accords are not enough to regulate investments and activities aimed at accomplishing sustainability objectives[141]. The Kyoto Protocol has a number of drawbacks in spite of its objectives. Major polluters, for instance, refuse to accept legally binding commitments unless poorer nations join, which makes it impossible to achieve the Kyoto Protocol's goal[142].

ii. The Paris Agreement of 2015

The 21st Conference of Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris in 2015[143]. The Paris Agreement was created in 2015 and became operative on November 4, 2016. It aims to keep global warming well below 2 degrees Celsius, preferring the more ambitious target of 1.5 degrees Celsius over pre-industrial levels. The literature to date has examined the Kyoto Protocol's effects on renewable energy in great detail. Nonetheless, the Paris Agreement establishes new objectives to direct all countries in lowering their carbon emissions worldwide. In comparison, the 2015 Paris Agreement is a major improvement over the Kyoto Protocol. The Paris Agreement recognizes the urgency of global climate action by committing both wealthy and developing countries to contribute to emissions reduction. By allowing countries to set their own emission-reduction targets, known as Nationally Determined Contributions (NDCs), it also increases flexibility and promotes a strategy that is more cognizant of national circumstances and the capacities of various countries[144]. Nationally Determined Contributions (NDCs), a key component of the 2015 Paris Agreement, a new global commitment in contrast to the Kyoto Protocol, is a framework that allows both developed and developing countries to set goals for reducing carbon emissions. According to this paradigm, global warming should be kept far below 2 degrees Celsius over pre-industrial levels, with efforts to limit the temperature increase to 1.5 degrees Celsius[145]. According to institutional theory, which maintains that institutions align their behavior within a social system, governments are subject to institutional limitations that affect their policies and activities[146]. International norms and public expectations may be among these forces. Organizations frequently copy or normalize the prevailing norms of their institutional environment in order to adapt to them[147]. In accordance with international standards and aspirations for sustainable development, this causes nations to become more interested in using renewable energy. As part of Nigeria's Nationally Determined Contributions, the president of Nigeria pledged to reduce greenhouse gas emissions by 20% unconditionally and 45% conditionally when

[138] N. Bamati, & A. Raoofi, 'Development level and the impact of technological factor on renewable energy production', (2020) (151) *Renew Energy*, 948.

[139] W. Liu, X. Zhang, S. Feng, "Does renewable energy policy work? Evidence from a panel data analysis", (2019) (135), *Renew Energy* 639.

[140] W. Przychodzen, & J. Przychodzen, "Determinants of renewable energy production in transition economies: A panel data approach", (2020) 191, *Energy,* 116583.

[141] A. Genus, & F. Mafakheri, "A neo-institutional perspective of supply chains and energy security: Bioenergy in the UK", (2014) (123) *Appl. Energy,* 310.

[142] O. Berrich, F. Mafakheri, H. Dabbou, "Renewable Energy Transition and the Paris Agreement: How Governance Quality Makes a Difference?" (2024) 17, *Energies* 2.

[143] M.A Lima, & Ors "Renewable energy in reducing greenhouse gas emissions: Reaching the goals of the Paris agreement in Brazil", (2020) 33, *Environmental Development*.

[144] W. Liu, X. Zhang, S. Feng, "Does Renewable Energy Policy Work? Evidence from a panel data analysis", (2019) (135), *Renew Energy* 639.

[145] I. Cadoret, F. Padovano, "The political drivers of Renewable Energies Policies", (2016) 56, *Energy Economics*, page 265.

[146] P.J. DiMaggio, W.W. Powell, "The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields", (1983) 48, *Am. Sociol. Review*. 150.

[147] O. Berrich, F. Mafakheri, H. Dabbou, "Renewable Energy Transition and the Paris Agreement: How Governance Quality Makes a Difference?" (2024) 17, *Energies* 3.

he signed the Paris Agreement. Petroleum-related activities have historically been at the center of case legislation supporting clean and renewable power generation. As a result, several laws pertaining to renewable energy are not strictly enforced in Nigeria.[148]

iii. The African Charter

The Banjul Charter, commonly known as the African Charter on Human and Peoples' Rights, was ratified on June 27, 1981, and went into effect on October 21, 1986. It aims to protect and preserve human rights and basic freedoms across Africa. The Charter recognizes the rights of both individuals and communities. It is crucial to remember that the Banjul Charter, often known as the African Charter on Human and Peoples' Rights,[149]acknowledges the African right to development in particular in Article 22. Article 24 also mentions development (the right to a generally satisfactory environment). It is unclear from the wording of the Banjul Charter how the rights to development and a generally adequate environment relate to each other. However, the recognition of the importance of sustainable development in the African Union's (AU) normative framework allows for an integrative approach that affirms that articles 22 and 24 are essential components in promoting sustainable development, which means that AU human rights law must address the problem of energy poverty on the African continent[150]. The moment has come to use paragraphs 22 and 24 to establish a right to contemporary energy as part of sustainable development. Therefore, we stress the importance of a right to energy for both the admirable objective of sustainable development of the African continent and the achievement of the Millennium Development Goals (MDGs) as outlined in the United Nations Millennium Declaration, 2000[151]. Under the principles of the African Union's 2000 Constitutive Act (Constitutive Act), AU member states share the objective of promoting the continent's sustainable development[152]. Regarding the creation of the African Economic Community (AEC), this goal is restated in the 1992 Treaty Establishing the African Economic Community (Abuja Treaty).The AEC seeks to support economic, social, and cultural development as well as the integration of African economies; coordinate and harmonize policies among present and future economic communities; and establish a continental framework for the development, mobilization, and utilization of Africa's human and material resources[153]. The Commission reaffirmed that the right to development is linked to the involvement of impacted communities and emphasized that "The right to development must include the freedom of choice."[154] According to the Abuja Treaty, initiatives aimed at achieving these goals should also support the continent's natural, self-sustaining, and independent growth[155]. Several additional AU instruments firmly establish the crucial idea of sustainable development[156]. It is necessary to consider how sustainable development connects paragraphs 22 and 24 of the Banjul Charter in order to appreciate its centrality in the AU normative framework. Therefore, it is crucial to quickly examine how AU paragraphs 22 and 24 relate to sustainable development[157]. The Banjul Charter, the first and only legally enforceable international human rights agreement, contains provisions pertaining to the right to development. A right to developments is embodied in Article 22, which says that in accordance with sub-article (1):

[148] M. C. UDO, 'An Overview of The Legal Framework and Institutional Bodies in Energy Law and Adoption of Sustainable Green Practices in Electricity in Nigeria', (2024) https://ssrn.com/abstract=4722571>accessed 2 August, 2025.

[149]African [Banjul] Charter on Human and Peoples' Rights, OAU Doc. CAB/LEG/678/3.

[150] M. Barnard & W. Scholtz, 'Fiat Lux! Deriving a right to energy from the African Charter on Human and Peoples' Rights' (2013) 38 *SAYIL*, 49.

[151] Third United Nations Conference for Least Developed Countries (2008) 2, *Outline for the modalities of the Fourth United Nations Conference on the Least Developed Countries and its preparatory process.*

[152]*Ibid*,53.

[153] Article 4(1) of the Abuja Treaty.

[154] M. Barnard & W. Scholtz, 'Fiat Lux! Deriving a right to energy from the African Charter on Human and Peoples' Rights' (2013) 38 *SAYIL*, 55.

[155] Article 4(1)(a) of the Abuja Treaty.

[156]Beyerlin 'The concept of sustainable development' in Wolfrum (ed) *Enforcing environmental2 7 standards: Economic mechanisms as viable means* (1996) 112. For a critical analysis see Viñuales 'The rise and fall of sustainable development' (2013) 22 *Review of Comparative and International Environmental Law* 3-13.

[157] Scholtz, 'Human rights and the environment in the African Union2 9 context' in Kotze and Grear (eds) *Research handbook on human rights and the environment* (2014).

[A]ll Every people has the right to their own economic, social, and cultural advancement while taking into account their freedom, identity, and equal opportunity to share the common legacy of all peoples.
Sub-article (2) affirms that:
[S]tates must be responsible for ensuring the exercise of the right to growth, either individually or collectively.[158]
A brief reflection on the text of article 22 is required. It's intriguing to note that the right to development encompasses more than simply economic development; it also entails cultural and social advancement in the interest of people's well-being[159].

6. Institutional Framework

Nigeria's renewable energy law is governed by a number of institutional and regulatory agencies, which are essential to the country's energy policy regulation and implementation; and are as follows:

i. Federal Ministry of Environment

The Federal Ministry of Environment aims to safeguard the environment, conserve natural resources, and promote sustainable development. Oversees the implementation of environmental laws and regulations and develops national environmental conservation and management policies.[160] The Ministry is tasked with formulating policies for the Federal Government on matters dealing with the provision of electricity from all sources of energy in Nigeria. It is also the function of the Ministry to develop and facilitate the implementation of policies for the provision of adequate and reliable power supply to drive the socio-economic development of the nation. The ministry generally provides direction to other ministries, agencies, and departments (MDAs) involved in the power sector in the country[161]. The Ministry in discharging its mandate is guided by the provisions of the following[162];

i. National Electric Power Policy (NEPP) of 2001,
ii. Electric Power Sector Reform (EPSR) Act of 2005 now repealed by Electricity Act 2023,
iii. Roadmap for Power Sector Reforms of August 2010,
iv. Rural Electrification Implementation Strategy and Plan, and Investment Guidelines, among others[163].

Regarding renewable energy, the Ministry's specific responsibilities include[164]:

a) creation of guidelines and suggestions for the federal government regarding renewable energy investment, policy, and legislation;
b) tracking and assessing the policy's performance and application in government organizations and the electrical market;
c) establishing, tracking, and assessing how well renewable energy policies are working to expand rural communities' access to electricity;
d) assisting federal agencies in closely coordinating their efforts to produce renewable electricity;
e) coordinating with the National Assembly on issues pertaining to the generation and use of renewable power and confirming that Nigeria's plan for renewable energy aligns with its national pledges in regional and global organizations (Federal Ministry of Power and Steel, 2006).

A summary of the Ministry's efforts to generate renewable energy may be found in a few significant initiatives that have affected the industry, such as:

a) Proserve Energy Services Limited was awarded a 10-year concession to build a 750kW solar power supply system, which is in line with the ministry's objective to support renewable energy and aid in decarbonization.[165]

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[158]African [Banjul] Charter on Human and Peoples' Rights, OAU Doc. CAB/LEG/678/3.
[159]*Ibid,* 54.
[160] A. O. Akinola, 'Environmental Regulation and Enforcement in Nigeria: Legal and Institutional Frameworks' [2018] (15) (2) *Journal of Environmental Law and Policy* 246
[161]C. Remteng & others, 'Policy and Regulatory Framework for Energy in Nigeria' (2021) *Open Africa Power Fellowship Programme https://energypedia.info/wiki/Policy_and_Regulatory_Framework_for_Energy_in_Nigeria.* Accessed 15thAugust, 2025.
[162]https://gigawattlawyer.com/2022/09/18/what-is-the-role-of-the-federal-ministry-of-power-in-the-nesi/< Accessed 15th August, 2025.
[163]*Ibid*
[164]https://www.eduweb.com.ng/nigeria-federal-ministry-of-power/<accessed 2 August, 2025.
[165] Israel Aye, and others "The Renewable Energy Law Review : Nigeria" Commercial and Energy Law Practice (2022) <https://thelawreviews.co.uk/title/the-renewable-energy-law-review/nigeria> accessed on 4 August, 2025

b) the 2012 Shiroro Hydropower Plant unit 2 repair work, which produced a 150MW recovery;
c) Preventive maintenance of the 2G2 hydropower facility at Jebba in 2012 to guarantee 96.4 MW of availability
d) Kainji's 1G5 and 1G12 units are undergoing rehabilitation in order to restore their 220 MW capabilities by December 2014;
e) Zunguru 700MW in Niger State;
f) Mambilla 3, 050MW project in Taraba State;
g) Guarara 11, 360MW project in Niger State;
h) Guarara 1, 30MW project in Niger State;
i) Itisi, 40MW project in Kaduna State;
j) Kashimbilla, 40MW project in Taraba State (FMP 2016).[166]

Providing Nigerians with consistent power is the Ministry's biggest issue. The overemphasis on non-renewable energy sources and the lack of a clear and precise regulatory framework to support the growth of renewable energy sources make the problem seem unsolvable.

iii. National Environmental Standards and Regulation Enforcement Agency

"Environmental preservation and development, biodiversity preservation, and the overall sustainable growth of Nigeria's natural resources" are the main responsibilities of the National Environmental Standards and Regulations Enforcement Agency (NESREA Agency), which was established by the NESREA Act of 2007.[167] According to the section 7 of the Act[168], functions the agency are;

i. Enforce adherence to environmental laws, rules, regulations, and standards.
ii. Coordinate and communicate with stakeholders on environmental standard rules and enforcement, both inside and outside of Nigeria.
iii. Enforce adherence to the environmental provisions of international accords, conventions, protocols, and treaties.
iv. Enforce adherence to laws, regulations, standards, and policies pertaining to pollution control, environmental health, water quality, and sanitation.
v. Enforce adherence to laws and regulations pertaining to biodiversity conservation, sustainable ecosystem management, and the advancement of Nigeria's natural resources.
vi. Enforce adherence to any laws pertaining to safe pesticide usage, chemical management, and the disposal of spent pesticide packages.
vii. Ensure adherence to laws governing the importation, manufacture, distribution, storage, scale, use, treatment, and disposal of hazardous waste and chemicals outside of the oil and gas industry.
viii. The environmental regulations and standards pertaining to noise, air, land, seas, oceans, and other water bodies that are not involved in the oil and gas industry are enforced by compliance monitoring.
ix. Verify that environmental initiatives supported by donor organizations and outside assistance providers follow laws pertaining to environmental safety and protection:
x. Use procedures for licensing, permits, and registration to enforce environmental control measures outside of the oil and gas industry.
xi. Conduct environmental audits and compile information on how environmental standards are enforced and regulated outside of the oil and gas sector.
xii. Increase public awareness and provide environmental education about sustainable environmental regulations outside of the oil and gas business, in addition to disseminating general scientific or other data generated from the completion of its tasks
xiii. Perform the tasks that are required or practical to carry out its duty.

These responsibilities are straightforward and easy for the Agency to carry out, and it demonstrates a high level of adherence to international renewable energy agreements and conventions. However, the National Environmental Standards and Regulations Enforcement Agency has not yet created a policy that recognizes the advancement of renewable energy as the main focus of sustainable development in the Nigerian renewable energy industry.

[166] *Ibid*
[167] The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, s 2.
[168] *Ibid*, s 7

iv. Nigerian Electricity Regulatory Commission (NERC)

Established in 2005 under the now-defunct Electric Power Sector Reform Act 2005 (repealed), the Nigerian Electricity Regulatory Commission (NERC) is an independent regulatory body[169]. The Electricity Act 2023 has now enlarged and shifted the functions, with the main objective being the technical and financial regulation of the Nigerian electricity supply sector. The Commission's responsibilities include licensing operators, establishing consumer rights and obligations, establishing operational regulations and standards, and setting industry tariffs that reflect costs. The commission is empowered by Act[170] to promote the expansion and utilization of renewable energy services and increase the proportion of renewable energy in Nigeria's energy mix. As of April 1, 2025, NERC has directed distribution companies (DisCos) to source at least 10% of their contracted energy from embedded generation sources, with half of the energy coming from renewable sources. This mandate requires each disco to buy a specific quantity of energy from embedded generation sources, with a part of that energy coming from renewable sources[171]. The Abuja Disco, for instance, is expected to buy at least 61.1 MW from embedded generation sources, of which 31 MW will come from renewable energy sources. This requirement appears to be similar to China's 2009 Energy Law, which requires grid companies to purchase a specific percentage of renewable energy out of their total power purchases. The difference is that Chinese law imposes a default penalty. The Electricity Act 2023 requires the NERC and Independent System Operators (ISO) to continuously produce electricity from renewable energy sources[172]. Furthermore, the Act directs the NERC to support renewable energy sources such as biomass, small hydro, wind, solar, and others through the management of its licenses[173].

Gross inefficiencies in the industry and the need to keep up with the quick advancements in technology and trends in the management of other nations' energy sectors prompted the creation of the Nigerian energy Regulatory Commission Gross inefficiencies in the industry and the need to keep up with the quick advancements in technology and trends in the management of other nations' energy sectors prompted the creation of the Nigerian energy Regulatory Commission[174]. Although the provisions of the Nigerian Electricity Regulatory Commission's mandates under the Electricity Act 2023 seem admirable, it is anticipated that their implementation won't render the NERC as ineffective as it was under the EPSRA Act 2005, which was abolished.

v. Energy Commission of Nigeria (ECN)

Act No. 62 of 1979 created the Energy Commission of Nigeria (ECN), which was subsequently revised by Acts No. 32 of 1988 and No. 19 of 1989[175]. The ECN's legislative responsibility is to coordinate and strategically plan national energy policies and all of their implications[176]. According to the mandate, the ECN is the highest government body with the authority to implement policies and plan the energy sector overall. Additionally, it can promote the diversity of energy resources by advancing and optimizing each one, including the introduction of novel and alternative energy sources such as biomass, solar, wind, and nuclear.[177] According to the Energy Commission Act, the Commission's primary responsibilities include obtaining and disseminating information on government policies regarding energy development, providing the government with advice on issues related to energy development, finance, research, making master plans, developing policies, utilizing, exploiting, executing projects, financing, and incentives[178]. The Commission has developed policy guidelines and programs to support renewable energy[179], despite

[169]Electricity Act, 2023 (preamble)

[170]*Ibid,* S 34 (1) (i).

[171]O. Oladipo, "NERC Mandates Discos to Source 10% of Power from Renewables, April 1, (2024)" >Businessday.Ng/nerc directive on disc>accessed 6th August, 2025.

[172]Electricity Act 2023. s 8.

[173]*Ibid*, s 80 (2).

[174]Idris, &others , "Assessment of the Power Sector Reform in Nigeria," *International Journal of Advancement in Research and Technology,* (2013) 2 (2) 9.

[175]https://www.devex.com/organizations/energy-commission-of-nigeria-ecn-150225accessed 6th August, 2025

[176] Energy Commission of Nigeria (ECN) Act No. 19 of 1989, as amended. S.1

[177]Devex, 'Energy Commission of Nigeria(ECN)' < https://www.devex.com/organizations/energy-commissionof-nigeria-ecn-150225> accessed on 5th August, 2025.

[178] Energy Commission of Nigeria Act, S. 5

[179]*Ibid*, S. 3.

the fact that the Act creating the Commission makes only passing mention of it and does not provide a particular mandate for its development. Among its initiatives to create renewable energy are:

(a) establishing an Energy Research and Development Center at Obafemi Awolowo University in Ile-Ife, Osun State.
(b) Ahmadu Bello University in Zaria, Kaduna State, is establishing a center for energy research and training.
(c) establishing the University of Nigeria's National Center for Energy Research and Development in Nsukka, Enugu State.
(d) Usman-Fodio University in Sokoto, Sokoto State, opens a research center.
(e) establishing an Energy Commission of Nigeria center at Benin City's University of Benin.

The nation's renewable energy infrastructures have benefited from these centers' ability to deploy renewable energy resources in specific locations[180]. The centers' initiatives are seen in various states across the country such as; Enugu, Kaduna Sokoto, Abiaand Lagos State.

The Nigerian Electricity Regulatory Commission's (NERC) a major challenge for the commissions is the Electricity Act of 2023's overlapping authority, which now includes licensing the operators of the power sector's generating, distribution, transmission, and trading value chain. According to the Electricity Act of 2023, the NERC has the authority to oversee and regulate the whole power industry. The Electricity Act 2023 does not specifically eliminate the ECN, which raises questions about the scope of its activities in relation to renewable energy in Nigeria's power industry.

vi. Nigerian Electricity Bulk Trading Plc (NEBT)

An important piece of institutional infrastructure in Nigeria's energy industry, the Nigerian energy Bulk Trading Plc (NEBT) is vital to the nation's power market. NEBT was first founded in 2010 as a market operator and bulk trader to help with Nigerian wholesale energy trading[181]. Controlling the energy market, completing the clearing process, settling electricity trading disputes, and purchasing electricity from producers and reselling it to distributors are among its prerequisites. Regarding the development of renewable energy, NEBT is responsible for acquiring renewable energy from independent power producers (IPPs) and integrating it into the national grid. Furthermore, NBT provides renewable energy producers with Renewable Energy Certificates (RECs), which can be traded on the power market and provide them with an additional revenue stream. NEBT also facilitates the integration of renewable energy sources into the national grid to ensure clean energy is integrated into the electrical supply. By doing this, NEBT helps to improve power supply and reliability, lower market volatility, encourage private sector investment, and increase the energy market's overall efficacy[182].

vii. Rural Electrification Agency (REA)

The Electricity Act 2023, which replaced the defunct EPSR Act 2005, created the Rural Electrification Agency (REA). The goal of the REA is to increase rural communities' access to electricity by using off-grid and renewable energy sources[183]. One of its projects is the Nigeria Electrification Project (NEP), which intends to install home systems and solar mini-grids in underprivileged areas. The Rural Electrification Agency is in a strong position to increase the availability of electricity for millions of Nigerians thanks to its workforce of about 200 public servants spread across its headquarters and six geopolitical zonal offices, as well as a number of embedded consultants who help build organizational capabilities on important projects and initiatives. The task of expanding access to electricity in Nigeria's rural, underserved, and unserved populations falls to the Rural Electrification Agency[184]. Capital Projects, the Nigeria Electrification Project (NEP), the Rural Electrification Fund (REF), and the Energizing Education Program (EEP) are just a few of the 14 programs at the REA that carry out this purpose[185]. Traditionally, completing grid extension projects to link last-mile customers was the REA's initial mandate. However, the emphasis has switched to private sector-led electrification models that use

[180]Devex, 'Energy Commission of Nigeria(ECN)' < https://www.devex.com/organizations/energy-commissionof-nigeria-ecn-150225> accessed on 5th August, 2025.
[181]Nigerian Bulk Electricity Trading Plc Annual Report 31 December 2023. Page 2
[182]Electricity Act 2023, S 6 (f)
[183]*Ibid.*
[184]*Ibid*, s 129.
[185]https://www.africaoutlookmag.com/energy-utilities/rural-electrification-agency-equalising-energy-access>accessed 6th August, 2025.

distributed energy resources (DERs), primarily solar mini-grids and stand-alone systems, while encouraging public-private partnerships (PPPs) as a result of the operationalization of REF Call projects and the NEP. According to the Rural Electrification Policy (REP) of 2005 and the NEPP of 2001, the Rural Electrification Agency's national goal is to increase access to electricity by 75 percent by 2020 and 90 percent by 2030, respectively, with at least 10% of the mix coming from renewable sources by 2025[186].

viii. Nigerian National Petroleum Company Limited (NNPC LTD)

According to the PIA 2021[187], the Minister of Petroleum must establish the Nigerian National Petroleum Company Limited (NNPC Limited) within six months after the Act's commencement. In reality, the firm changed its name from Nigerian National Petroleum Corporation (NNPC) and Nigerian National Oil Corporation (NNOC) to NNPC Limited through a merger. The Nigerian government owns the recently created NNPC Limited, a private company, but it is meant to function as a stand-alone business. The Petroleum Industry Act of 2021 explicitly outlines NNPC's goals. In accordance with section 64 (h),[188] the Act mandates that in order to develop renewable resources, NNPC Limited must contend with private investors. Several efforts have been undertaken by the Nigerian National Petroleum Company Limited to accomplish these objectives, including;

a) creation of a section dedicated to renewable energy to manage its renewable energy projects;
b) intending to build 1000MW solar power projects in states including Kano, Katsina, and Nasarawa (Guardian, 2021);
c) declaration of interest in using forestry leftovers and agricultural waste to create biofuels;
d) Working with some foreign companies to research renewable energy sources like solar, wind, and hydro power and to plan for the creation of an energy transition that aims to properly utilize these resources will increase the percentage of renewable energy in the country's energy mix.

ix. National Hydroelectric Power Producing Areas Development Commission (N-HYPPADEC)

The National Assembly's Act, which was passed and signed in 2010, created the Hydroelectric Power Producing Areas Development Commission to handle the environmental issues caused by hydroelectric dam operations[189], Since Benue and Plateau states were added to the Act, 10% of the money from the hydro plant concession and royalties paid to the federal government now replaces 30% of the total revenue received by the businesses or authorities operating in the host communities[190]. In 2016, Amendment II was made to the Hydroelectric Power Producing Areas Development Commission Act, reducing the percentage of total revenue deductible from revenue generated by any authority or company from the operations of any hydroelectric dam in any Commission member state from 30% to 10%. In December 2020, the Commission's Governing Council was established[191]. Focusing on specific regions or communities adversely impacted by the hydroelectric dam is the primary goal of the Hydroelectric Power Producing communities Development Commission, or HYPPADEC. Effective resource management that is transparent and economical is another aspect of their aim. to encourage the socioeconomic growth of localities impacted by hydroelectric dam construction in various states;[192] moreover, the growth of the designated regions or places. The commission's objective is to use resources in the most open, acceptable, and economical way possible to mitigate the adverse effects of hydroelectric dam operations in member states of the Hydroelectric Power Producing Areas Development Commission, with the goal of bringing about sustainable and equitable development that will benefit HYPPADEC member states. Its primary responsibility is to formulate policies and guidelines for the development of hydroelectric power producing areas and manage ecological threats resulting from dam operations and other hydroelectric power activities. Over the years, the commission has been inconsistent and ineffectual, which has impeded its growth due to unclear direction, insufficient financing, and poor stakeholder engagement.

[186] (n120)
[187]Petroleum Industry Act 2021 S.53
[188]Petroleum Industry Act PIA 2021 Cap P10 LFN 2004
[189]Electric Power Act 2023. S. 82.
[190]https://africasecurityinvestigation.data.blog/2025/03/06/the-transformation-of-hypadec-under-the-leadership-of-alh-abubakar-sadiq-yelwaa-by-dr-emmanuel-daudu/ accessed 29th July, 2025
[191](n124).
[192]Electric Power Act 2023. S. 84 (3) (k).

Many projects that were supposed to help the communities were either abandoned or badly carried out under the previous government, which left the locals unhappy. This disconnect is brought to light by reports that show how frustrated local populations are[193].

7. Conclusion

Since renewable energy ameliorates Nigeria's energy crisis, lessens dependency on fossil fuels, boosts economic growth, and complies with international environmental sustainable development goals, it is essential to encourage renewable energy projects in the nation through tax policies and legal reforms. Renewable energy projects are encouraged by a few laws and policies, such as Feed-in Tariffs and Power Purchase Agreements, VAT exemption for the importation of renewable energy equipment, pioneer status incentives, etc. However, there are still many obstacles to overcome, including a lack of a suitable legal and regulatory framework, high costs, financing, public awareness, infrastructure, and technological advancements. These challenges, if not properly addressed, may affect the growth and participation in renewable energy projects. To overcome these challenges, Nigeria must harmonize its energy policies, enhance incentives, apportion adequate funding in the sector, hold institutions accountable, commit to technological innovation and improve public awareness. Strengthening partnerships with international development agencies and fostering private-sector involvement are also crucial for scaling up renewable energy infrastructure. However, Nigeria can overcome these obstacles and create a robust renewable energy sector that serves all Nigerians with concerted policy initiatives, significant investments, and a dedication to technological innovation. Nigeria needs to be at the forefront of promoting renewable energy initiatives in Africa while simultaneously reducing its reliance on fossil fuels to around 20% of the nation's total energy consumption. This will ensure a cleaner, more resilient energy future that supports both environmental sustainability and economic growth.

[193]*Ibid.*