

Law, Policy, and the Development of Renewable Energy for Electricity: A Case for a Renewable Energy Law in Nigeria¹

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Abstract

Nigeria faces a perennial problem of inadequate electricity generation and supply. Electricity generation from fossil fuel sources has not succeeded in meeting the electricity needs of the country. And attempts to diversify electricity generation sources to include renewable energy sources have not been successful. Although there is a policy direction supporting the inclusion of renewable energy sources for electricity generation, the Electric Power Sector Reform Act 2005 (ESPR) has not succeeded in achieving the country's sustainable electricity drive. Nigeria needs to vigorously pursue its renewable electricity objectives through a law dedicated to encouraging uptake of renewable energy. This article examines the law and the policies underpinning Nigeria's sustainable electricity drive through a critique of the ESPR Act and the energy policy in light of Nigeria's renewable electricity objectives.

INTRODUCTION

Energy is an important component of life and a key driver of sustainable development (SD). Regarded as 'an entry point to achieving broader society objectives,'² From time immemorial, the pursuit of energy production that supports development has been the focus of humankind.³ Scholars have argued that no nation can address the challenges of economic development and reduce poverty in the absence of massive deployment of energy.⁴ Moreover, population growth is inextricably connected to energy consumption: the more populated a country is, the greater its energy requirements.⁵ For this reason, countries with high populations and population growth should prepare for more energy use by ensuring the security of the energy system.⁶

Electricity is the most widely use form of energy and access to it is generally recognized as key to achieving sustainable human and economic development. In Africa, lack of electricity access has been identified as a major

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² Thomas B. Johansson, "The Imperative of Energy for Sustainable Development," in *The Law of Energy for Sustainable Development* ed. Adrian J. Bradbrook et al. (Cambridge: Cambridge University Press, 2005), p. 46.

³ Tomislav Klarin, "The Concept of Sustainable Development: From its Beginning to the Contemporary Issues" *Zagreb International Review of Economics & Business* vol. 20 no. 1 (2018), p. 67.

⁴ Yinka Omorogbe, "The Role of Law in Promoting Renewable Energies in Africa", in *Perspectives on Energy Security and Renewable Energies in Sub-Saharan Africa: Practical Opportunities and Regulatory Challenges* ed. O. C. Ruppel and B. Althusmann (Macmillan Education, 2016), p. 221.

⁵ B. M. Francis, L. Moseley and S. O. Iyare "Energy Consumption and Projected Growth in Selected Caribbean Countries," *Energy Economics* vol. 29 no. 6 (2010), p. 1224.

⁶ Kamil Kaygusuz, "Energy for Sustainable Development: A Case of Developing Countries", *Renewable and Sustainable Energy Reviews* vol. 16 (2012), p. 1116.

cause of underdevelopment there.⁷ Although there is a projection that about 1 billion people in Africa will have electricity access by 2040, another 530 million people (mostly in the rural areas of sub-Saharan Africa) will be without electricity on account of population increase.⁸ Addressing this has been a major challenge to African countries, including Nigeria.⁹ Some African countries have had to search for a sustainable means of electricity generation to boost electricity capacity in response to anticipated future increase in electricity demand.

In Nigeria, the rate of electricity access is abysmally low. Since the 1960s, an increase in the population and acceleration in the rates of increase in urbanization have led to a vast increase in the demand for electricity in Nigeria. Nearly all sectors of the Nigerian economy rely on electricity, though for different purposes. Prior to independence in 1960, and for many years after independence, coal and hydro were the main sources of electricity generation before Nigeria switched to gas as a major fuel for electricity generation.¹⁰ Presently, gas alone accounts for more than 80% of electricity generation in Nigeria.¹¹ Apart from its negative environmental impact, gas is subject to fluctuation in supply, and its supply can be depleted in the long run. For a long time now, disruption in gas supply has been a major factor of frequent collapses in electricity supply in Nigeria. The fluctuation in supply has affected the ability of the gas-fired plants to deliver at a maximum capacity.¹² On many occasions, the unreliability of gas supply has forced Nigeria to rely on hydro-electricity alone, the maximum capacity of which cannot satisfy the country's electricity requirements.

The large hydro is no different as extreme weather conditions usually affect the capacity of the country's hydro electricity supply.¹³ With electricity generation largely from thermal sources (gas and large hydro), Nigeria faces the challenges of delivering reliable and sustainable electricity to its citizens. Although Nigeria has a policy for the optimal utilization of its energy resources (including renewable energy) to achieve energy security, the country's electricity legislation, that is, the Electric Power Sector Reform Act 2005 ("EPSR Act") has not promoted the inclusion of renewable-sourced electricity. Apart from insignificant contribution of renewable energy to electricity generation, Nigeria is yet to connect electricity from renewable energy sources to the national grid, even though the available renewable energy resources can conveniently generate electricity to meet both the current and the future needs.¹⁴

The article contends that Nigeria cannot sustainably explore its renewable energy resources for power generation, drive renewable electricity targets and address the challenges of electricity access in the absence of specific

⁷ Moussa P. Blimpo and Malcolm Cosgrove-Davies, "Electricity Access in Sub-Sahara Africa: Taking Stock and Looking Forward," in *Electricity Access in Sub-Sahara Africa: Uptake, Reliability, and Complementary Factors for Economic Impact* (World Bank, Washington DC, 2019) Chapter 1, p. 11

⁸ International Energy Agency (IEA), *Africa Energy Outlook: A Focus on Energy Prospects in Sub-Saharan Africa* (2014) 3, 122; International Centre for Trade and Sustainable Development (ICTSD), "Harnessing Renewable Energy for Sustainable Development," *Bridges Africa* vol. 7 no. 3 (2018), p. 3.

⁹ Subhes C. Bhattacharyya, "Energy Access and Development," in *The Handbook of Global Energy Policy* (ed), Andreas Goldthainalu (John Wiley & Sons, 2013), p. 227.

¹⁰ United Nations Environment programme (UNEP), "Atlas of Energy Resources in Africa," UNEP (Nairobi, 2017) 66 <https://www.icafrica.org/fileadmin/documents/Publications/Africa_Energy_Atlas.pdf>; Ismaila H. Zarma, *Hydro Power Resources in Nigeria, Energy Commission of Nigeria*, a country position paper presented at 2nd Hydro Power for Today Conference International Centre on Small Hydro Power (IC-SHP), Hangzhou, China 2006.

¹¹ Dolapo Kukoyi and Adeyemi Esan, "Nigeria," in Karen B. Wong (ed), *The Renewable Energy Law Review* (Law Business Research, 2018), p. 108.

¹² Zubairu G. Usman, Serkan Abbasoglu, Neyre T. Ersoy and Murat Fahrioglu, 'Transforming the Nigeria Power Sector for Sustainable Development' (2015) 87 *Energy Policy* 429, 429; Sunday E. Simon, Electricity: Nigeria loses 4,379MW to distribution, gas constraints, Daily Trust 7 August 2018 <<https://www.dailytrust.com.ng/electricity-nigeria-loses-4-379mw-to-distribution-gas-constraints-264541.html>>; Nigerian Bulk Electricity Trading Plc, 'Utility Scale Solar Development in Nigeria in Comparison to Other African Countries' NBET Discussion Paper Series (November 2016) 5.

¹³ Olutola B. Fakehinde, Ojo S. Fayomi, Uyi K. Efemwenkieki, Kunle O. Babaremu, David O. Kolawole and Sunday Oyedepo, "Viability of Hydroelectricity in Nigeria and the Future Prospect," *Energy Procedia* vol. 157 (2019), p. 871 at 876; R. C. Ijeoma and I. Briggs, "Hydro Power Generation in Nigeria, Environmental Ramification," *IOSR Journal of Electrical and Electronics Engineering* vol. 13 no. 5 (2018), p. 1.

¹⁴ Sam Amadi, "Improving Electricity Access through Policy Reform: A Theoretical Statement on Legal Reform in Nigeria's Power Sector" in Yinka Omorogbe and Ordor A. Okoye (eds), *Ending Africa's Energy Deficit and the Law: Achieving Sustainable Energy for All in Africa* (Oxford University Press, 2018), pp. 346–347.

renewable energy legislation. The EPSR Act has not and cannot drive the uptake of renewable energy resource for electricity generation. Nigeria needs a paradigm shift with respect to electricity law if the country is to achieve energy sustainability. Without this specific legislation, it may be difficult (if not impossible) for Nigeria to actualize its sustainable electricity objectives.

This article is divided into five sections. Section 1 sets the context for the need for an affirmative renewable energy law in Nigeria to promote electricity generation from renewables. Section 2 examines the background to the pursuit of sustainable energy development. Section 3 analyzes the legal framework for renewable electricity in Nigeria. Section 3 is further sub-divided into two categories: electricity legislation; and renewable energy policy in Nigeria. Section 4 looks at the role of law in promoting sustainable energy, and the extent to which the EPSR Act has roles. Section 5 concludes the article.

THE NEED FOR A RENEWABLE ENERGY LAW IN NIGERIA

In Nigeria, sustainable energy entails “the provision of energy services in a sustainable manner, which in turn necessitates that energy services be provided for all people in ways that, now and in the future, are sufficient to provide the basic necessities, affordable, not detrimental to the environment, and acceptable to communities and people.”¹⁵ It encompasses the development of energy resources (including renewable energy), energy infrastructure and the satisfaction of development needs.¹⁶ A key component of sustainable energy production in Nigeria is the production and use of electricity in a manner that guarantees electricity supply now and in the future.

Nigeria’s search for sustainable electricity generation can be traced to the 1970s oil shock. The crisis saw Nigeria earning substantial amounts in revenue from oil, but also a rising inflation rate and the neglect of the other sectors of the economy.¹⁷ The inflation caused by the ‘oil windfall’ affected the prices of energy services in the country. As a result, there was an astronomical increase in the prices of essential goods and services in the local markets, including energy services. The price increase later became a threat to the security of the country’s energy system. Thermal energy, comprised of petroleum and hydroelectricity, was the main source of power generation at the time. By the early 1980s, Nigeria was ready to diversify its energy base to include alternative energy so as to reduce reliance on imported petroleum products.¹⁸ The diversification effort targeted three key areas, namely: (1) the use of crop and wood plantations (biomass); (2) solar energy; and (3) hydropower for electricity.¹⁹ The strategy focused on how to address the challenges of energy insecurity and the unreliability of the supply system, which had affected electricity supply in the country.²⁰

The proposed diversification strategy could not, however, be pursued until 2003 due to the absence of energy policy to drive it when Nigeria had the first comprehensive energy policy.²¹ Prior to this time, Nigeria had switched to gas as the principal source of electricity generation, and overdependence on it had further deepened the energy crisis. In addition, the total electricity generation capacity from all the thermal plants could not satisfy the electricity need of the country, even if Nigeria generated electricity at its maximum capacity.²² In view of the realities at the time, that is, increased population projections, decreased generation capacity, and anticipated future economic

¹⁵ Ibid. 11.

¹⁶ Oyedepo Sunday, “Energy and sustainable development in Nigeria: the way forward,” *Sustainability and Society* vol. 2 (2012), p. 11.

¹⁷ Brian Pinto, “Nigeria During and After the Oil Boom: A Policy Comparison with Indonesia,” *World Bank Economic Review* vol. 1 no. 2 (1987), p. 419.

¹⁸ United Nations, “Report of the United Nations Conference on New and Renewable Sources of Energy” (United Nations 10 August–21 August 1981), p. 113 <https://digitallibrary.un.org/record/25034/files/A_CONF-100_11-EN.pdf>.

¹⁹ Ibid.

²⁰ Energy Commission of Nigeria (ECN), *National Energy Policy* (Presidency, April 2003), p. 4.

²¹ There was an attempt in 1984 to produce a Draft Energy Policy Guideline by the then Federal Ministry of Science and Technology. Similar attempt by the Energy Commission of Nigeria to develop the Draft Energy Policy in 1993 did not see the light of the day. See, ECN, *National Energy Policy* (n 19), 2.

²² Sam Amadi, “The Expectations of Nigerian Consumers of Electricity Under a Post Privatization Era: Issues & Perspectives,” <<http://www.nercng.org/index.php/document-library/NERC-Presentations-Reports-and-Papers/The-Expectations-of-Nigerian-Consumers-of-Electricity-Under-a-Post-Privatization-Era-Issues-and-Perspectives-March-14-2014/>>.

development, it was imperative for Nigeria to expand its electricity generation capacity by exploring other sources, the existing system having failed to deliver the right volume of electricity.

There is a consensus that the use of renewable energy is a better option when it comes to addressing the challenges of energy insecurity caused by increased energy demand and high prices.²³ So, by the time the NEP was approved in 2003, the need to include electricity from renewable energy sources as a panacea to the energy insecurity in the country was made a key plank of the NEP. The new strategy targets the expansion of electricity generation sources to include renewable energy to ensure availability, reliability and affordability of electricity for sustainable economic growth and developments.²⁴ The goal of sustainable electricity generation in Nigeria is not to generate electricity from renewable energy sources alone, but rather to broaden the sources of fuel for electricity generation by gradually including renewable energy in the electricity mix to take care of any sudden change in fossil energy sources.²⁵ Since 2003, subsequent energy policy has continued to support diversification of electricity generation sources to include non-depleting energy sources with minimal environmental impacts. Subsequent policy documents in Nigeria have targeted electricity generation and expansion using renewables.²⁶ With the policy documents, Nigeria has set objectives for sustainable use of renewable energy for electricity generation to achieve a diversified energy mix,²⁷ that is, increased energy availability (energy security), improved access (energy equity) and protection of the environment (environmental sustainability).²⁸

The renewable energy objectives in Nigeria are in tandem with the rightly recognized renewable energy objectives. Globally, the use of renewable energy sources is regarded as synonymous to sustainable energy development. According to Lambrides et al., the adoption of a system that incorporates electricity supply from renewable energy sources in the energy mix is a strategy for a sustainable growth given that the use of renewable energy source will result neither in depletion nor cause environmental hazards.²⁹

Renewable energy has the potential to expand electricity access in a timely and sustainable fashion. It can be deployed and tailored to suit local conditions in cases where grid expansion is not economically feasible.³⁰ Renewable energy technologies (such as standalone and mini-grids) are also important in providing electricity access to many rural communities in Africa since these technologies facilitate the use of fossil fuel energy in a climate-friendly manner.³¹ It is based on the potentials of renewable energy that this energy source is regarded as a preferred source when considering the plight of millions of people without electricity.³² Renewable energy source, in this context, encompasses the traditional energy sources (biomass and animal wastes) and “modern technologies based on solar, wind, biomass, geothermal and small hydropower.”³³

In Nigeria, renewable energy has been defined in the context of the characteristics of these resources. In Nigeria’s energy policy, renewable energy is defined as “energy obtained from energy sources whose utilization does not result in the depletion of the earth’s resources.” Nigeria also reflects the concept of minimal environmental

²³ Subhes C. Bhattacharyya, ‘Renewable Energies and the Poor: Niche or Nexus?’, *Energy Policy* vol. 34 (2006), p. 659.

²⁴ ECN, *National Energy Policy* (n 19) 36.

²⁵ Ibid.

²⁶ Olufolahan Osunmuyiwa and Agni Kalfagianni, ‘Transitions in Unlikely Places: Exploring the Conditions for Renewable Energy Adoption in Nigeria,’ *Environmental Innovation and Society Transition* vol. 22 (2017), p. 26; Nnaemeka Emodi and Kyung-Jin Boo, ‘Sustainable Energy Development in Nigeria: Overcoming Energy Poverty,’ *International Journal of Energy Economics and Policy* vol. 5, no. 2 (2015), p. 585.

²⁷ National Planning Commission, ‘Report of the Vision 2020 National Technical Working Group on Energy Sector’ (Presidency, 2009), p. 144.

²⁸ Chibueze Ebii, ‘Can Nigeria Meet its Electricity Goals by 2030? We found out’ (Heinrich Boll Stiftung, 2019) <<https://ng.boell.org/en/2019/10/11/can-nigeria-meet-its-electricity-goals-2030-we-found-out>>.

²⁹ Mark Lambrides, John A. Armstrong and Jan Hamrin, ‘The Renewable Energy Policy Manual’ (United States Export Council for Renewable Energy, 2000) <<http://www.oas.org/usde/publications/Unit/oea79e/oea79e.pdf>>.

³⁰ See, International Renewable Energy Agency, ‘Off-grid renewable energy solutions to expand electricity access: An opportunity not to be missed’ (Abu Dhabi 2019) 5 <https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Off-grid_RE_Access_2019.pdf>.

³¹ United Nations Department of Economic and Social Affairs, ‘Improving sustainable energy access for rural areas,’ (New York, January 2014) <<http://www.un.org/en/development/desa/news/sustainable/rural-energy-access.html>>.

³² International Renewable Energy Agency, ‘Policies and Regulations for Renewable Energy Mini-Grids’ (2018), p. 6.

³³ Eric Martinot et al., ‘Renewable Energy Markets in Developing Countries,’ *Annual Review of Energy and the Environment* vol. 27 (2002), p. 310.

impacts by describing renewable energy further as “energy sources and technologies that have minimal environmental impacts, such as less intrusive hydroelectricity and certain biomass combustion.”³⁴ Nigeria is blessed with renewable resources in a volume that can be exploited commercially for electricity generation. The average solar radiation in Nigeria, which varies according to location, is about 3.5–7kWh/m²/day.³⁵ From only about 1% of the land areas in the country, Nigeria can generate not less than 36,000MW of electricity from solar energy (a figure that is more than what Nigeria currently generates from all its power plants).³⁶ Nigeria also experiences strong wind in different parts of the country, with average speed ranging between 1.4m/s and 3.0m/s in the South and between 4.0m/s and 5.12m/s in the North.³⁷ The Atlantic Ocean that surrounds some parts of southern Nigeria provides additional potential for offshore wind energy.³⁸ Small hydro is another renewable energy resource that is available in almost every part of Nigeria and from which the country can generate about 3,500MW.³⁹ Biomass resources are estimated to be around 144 million tonnes/year. Although biomass can be exploited for electricity generation, Nigeria has been exploiting its biomass in an unsustainable manner mostly for domestic use.⁴⁰

Nigeria has set renewable electricity targets as a means of ensuring the inclusion of electricity from renewable sources in the nation’s electricity mix; however, as laudable as the renewable electricity targets are, electricity generation in Nigeria is far from being sustainable. Nigeria still experiences fluctuations in electricity generation as a result of changes in electricity fuel sources, which are currently dominated by gas and hydroelectricity.⁴¹ The legal and regulatory framework for electricity in Nigeria has not brought any significant changes to the development of renewable energy resources for electricity generation sources. This article will now examine law and the policy relating to the development of renewable energy for electricity generation in Nigeria.

LAW, POLICY AND THE DEVELOPMENT OF RENEWABLE FOR ELECTRICITY IN NIGERIA

In Nigeria, there is no legal framework for renewable electricity separate from the general framework for the regulation of electricity from the conventional energy sources. The regulation is a matter of renewable energy is a matter of law and energy/electricity policy. The Constitution is the foundation for electricity regulation, including renewable electricity.⁴² It divides the powers over electricity generation, transmission and distribution between the federal government (GoN) and the 36 states (SGs).⁴³ The GoN exercises power over electricity generation,

³⁴ Federal Ministry of Power, “National Renewable Energy and Energy Efficiency Policy” (Federal Republic of Nigeria, 2015), pp. 1–2.

³⁵ NPC, *Report of the Vision 2020 National Technical Working Group on Energy Sector* (n 26) 15; Mohammed Shaaban and J. O. Petinrin, “Renewable Energy Potentials in Nigeria: Meeting Rural Energy Needs,” *Renewable and Sustainable Energy Reviews* vol. 29 (2014), p. 76.

³⁶ Sunday O. Oyedepo, Olufemi P. Babalola, Stephen C. Nwanya, Oluwaseun Kilanko, Richard O. Leramo, Abraham K. Aworinde, Tunde Adekeye, Joseph A. Oyebanji, Abiodun O. Abidakun and Orobome L. Agberegha, “Towards a Sustainable Electricity Supply in Nigeria: The Role of Decentralized Renewable Energy System,” *European Journal of Sustainable Development Research* vol. 2, no. 4 (2018), p. 14; Hna Blakk and Michael Thomas, “The Nigerian Power Sector Reforms: Overcoming Post-Privatization,” (Banwo & Ighodalo), p. 5 <https://www.academia.edu/28025509/THE_NIGERIAN_POWER_SECTOR_REFORMS_OVERCOMING_POST-PRIVATIZATION>.

³⁷ Agbetuyi et al, ‘Wind Energy Potential in Nigeria’ (2012) 3(1) *International Electrical Engineering Journal* vol. 3 no. 1 (2012), p. 601; FMP, *National Renewable Energy and Energy Efficiency Policy* (n 33) 15.

³⁸ N. A. Udo, A. Oluleye and K. A. Ishola, “Investigation of Wind Power Potential over Some Selected Coastal Cities in Nigeria,” *Innovative Energy Research* vol. 6 (2017), p. 2.

³⁹ NPC, *Report of the Vision 2020 National Technical Working Group on Energy Sector* (n 26) 60; Oyedepo et al, ‘Towards a Sustainable Electricity Supply in Nigeria’ (n 35) 11.

⁴⁰ Energy Commission of Nigeria (ECN), “Energy Implications of Vision 20: 2020 and Beyond” (Energy Commission of Nigeria, Abuja, 2014) pp. 7 & 17; NACOP, *Sustainable Energy for All Action Agenda* (n 13) 12, 21; Environmental and Energy Study Institute, “Bioenergy” (Biofuels and Biomass) <<http://www.eesi.org/topics/bioenergy-biofuels-biomass/description>>.

⁴¹ Kayode Olaniyan, Benjamin C. McLellan, Seiichi Ogata and Tetsuo Tezuka, “Estimating Residential Electricity Consumption in Nigeria to Support Energy Transitions,” *Sustainability* vol. 10 (2018), pp. 3 & 7.

⁴² Ayodele Oni, “The Nigerian constitution, states and electricity regulation” (BusinessDay 10 April 2014).

⁴³ FMPS, *Renewable Electricity Policy Guidelines* (n 19) 9; Yemi Oke, “Conflicting laws keep Nigeria’s electricity supply unreliable” 23 August, 2017 <<https://theconversation.com/conflicting-laws-keep-nigerias-electricity-supply-unreliable-81393>>.

transmission, and distribution of electricity over the national grid, while the powers of the SGs are limited to electricity functions not covered by the grid.⁴⁴ The Constitution does not differentiate between fossil-fuel electricity and renewable electricity. So, the powers of the GoN and the SGs respectively apply to both conventional and renewable electricity.

ELECTRICITY LAW

The earliest legislation for the regulation of electricity in Nigeria was the Electricity Corporation of Nigeria Ordinance No. 15 of 1950, which created the Electricity Corporation of Nigeria (ECN).⁴⁵ In 1962, the GoN created the Nigeria Dam Authority (NDA) for the development of hydro for electricity generation.⁴⁶ Following the Ordinance was Decree No. 24 of 1972. The Decree merged the two utility companies at the time (that is, the ECN and the NDA) into a single body to form the National Electric Power Authority (NEPA). The Ordinance and the Decree later became Acts of Parliament as the Electricity Act and the National Electric Power Authority Act respectively.⁴⁷ At this time, Nigeria does not have a policy direction on the use of renewable energy for electricity generation. So, the Ordinance and the Decree did not contain provisions that could promote uptake of renewable energy for electricity generation.

In 1979, Nigeria enacted the Energy Commission of Nigeria Act (the “ECN Act”) for the regulation and development of renewable energy. The ECN Act establishes the Energy Commission of Nigeria to coordinate research on alternative energy. The Commission oversees strategic planning and coordination of energy development, and performance monitoring. The Commission also prepares periodic masterplans, makes recommendations to the Minister on the exploitation of new energy resources and ensures a broad-based participation in the energy sector.⁴⁸ By law, the functions of the Commission are essentially research and data gathering on the use of alternative energy resources in Nigeria.⁴⁹ The ECN Act is not an electricity law, hence the little impact it has within the electricity sector. Its only connection to electricity generation is in respect of the powers of the Commission in relation to energy policy formulation.⁵⁰ Some of the policies developed by the Commission for the energy sector have bearing on electricity generation from renewable energy source.⁵¹

It was not until the year 2005 that Nigeria passed a new law, the EPSR Act, for the electricity sector. The EPSR Act repeals the Electricity Act and the National Electric Power Authority Act.⁵² The EPSR Act provides legislative support for the reforms in the electricity sector at the time. The EPSR Act, among other things, provides access to private sector funds, reduces electricity generation and transmission losses, and promotes sustainable cost pricing for electricity.⁵³ The Act introduces a competitive and liberalized electricity market in Nigeria by disbanding the monopoly of the state-owned utility company. It changes the power structure that existed prior to 2005 to vertically unbundled segments for a liberalized electricity market. In the area of regulation, the EPSR Act establishes the Nigerian Electricity Regulatory Commission (NERC) as the sole regulator for the electricity sector. NERC is in

⁴⁴ Concurrent Legislative Lists, Second Schedule to the 1999 Constitution, paras 13, 14; Worika, Ibibia L, ‘Rural Applications’ in Richard Ottinger et al. (eds), *UNEP Handbook for Drafting Laws on Energy Efficiency and Renewable Energy* (United Nations Environmental Programme, 2016), p. 279. Although Item 13 does not contain the phrase “national grid”, it can be inferred from the provisions of Item 14 that the electricity generation and transmission referred to in Item 13 relates to the national grid.

⁴⁵ Yola Electricity Distribution Company, “About Us,” <yedc.com.ng>.

⁴⁶ Ismaila H. Zarma, *Hydro Power Resources in Nigeria, Energy Commission of Nigeria* (Country position paper presented at 2nd Hydro Power for Today Conference, International Centre on Small Hydro Power, Hangzhou, China 2006).

⁴⁷ Electricity Act 1990; National Electric Power Authority Act 1990.

⁴⁸ Energy Commission Act 2004 preamble and ss 1(1) and 5(d)&(e); Federal Ministry of Power and Steel, “Renewable Energy Policy Guidelines,” (Federal Republic of Nigeria, 2006), p. 22.

⁴⁹ Ifeyinwa Ufodu, Ike C. Ibeku and Felix Obetta, “Renewable Energy in Nigeria,” (Bechmac and Ince) <<https://www.lexology.com/library/detail.aspx?g=e3a5d485-f596-4f59-b9bd-ba5dd5ae31f5>>.

⁵⁰ Energy Commission of Nigeria Act s 5(d)(i).

⁵¹ Energy Commission of Nigeria (ECN), *Renewable Energy Master Plan* (Energy Commission of Nigeria, Abuja, 2012).

⁵² Electric Power Sector Reform Act 2005 s 99.

⁵³ Dimitri Papaefstratiou, “The Nigerian power market experiment: a critical appraisal of the PHCN privatisation,” DLA Piper, Insights (15 March 2019) <<https://www.dlapiper.com/en/uk/insights/publications/2019/03/the-nigerian-electricity-market-experiment/>>.

charge of tariff setting and the granting of licenses for electricity functions.⁵⁴ How the EPSR Act impacts on the development of renewable energy will be examined later in this article.

ENERGY POLICY

Energy policy in Nigeria embodies the Nigeria's vision for a sustainable energy including electricity generation. The goal of Nigeria's energy policy is the promotion of energy security through a robust energy system. Nigeria plans to diversify the energy sources based on the principle of "an energy economy in which modern renewable energy increases its share of energy consumed and provide affordable access to energy through-out Nigeria, thus contributing to sustainable development and environmental conservations."⁵⁵ The first policy in Nigeria to address the use of renewable energy is the Draft National Policy on the Environment – was created in 1998.⁵⁶ The document, though an environmental policy document, was the first document to create awareness about the potential of RE resources in Nigeria. It envisaged that energy consumption in Nigeria would increase as the level of industrialization increased and, therefore, urged the government to, as a matter of urgency, consider alternative energy resources to address the anticipated increase in energy consumption. The policy was never finalized and adopted.

In 2005, Nigeria approved the NEP as the first sector-wide policy to bring together in one document individual energy sub-sector policies, that is, oil and gas, electricity and solid minerals.⁵⁷ NEP serves as a blueprint for SD and utilization of energy resources in Nigeria in a manner that will facilitate international trade and cooperation.⁵⁸ The policy trust of the NEP "is the optimal utilization of the nation's energy resources for sustainable development."⁵⁹ It seeks to promote sustainable energy at appropriate costs; aid the use of the nation's energy resources for international cooperation; and increase the contribution of energy-productive activities to national development. NEP highlights strategies for exploring RE resources such as information gathering on emerging technologies, encouraging research and development on RE technologies and prioritizing the viability of these resources.⁶⁰ In the area of electricity generation, NEP expands the sources of fuel for electricity generation which were hitherto dominated by gas and hydro by providing eight fuel mix for electricity generation: nuclear, coal, natural gas, hydro, small hydro, biomass, solar, and wind.⁶¹ It also identifies environmental challenges that may have impacts on energy production in Nigeria, sets targets for electricity access rates and the role of renewable energy in the realization of targets for electricity access.⁶²

In 2005, Nigeria came up with a specific policy on the development of renewable energy with the drafting of the Renewable Energy Masterplan (REM). REM highlights the Nigeria's vision on the role of renewable energy source in nation building and how renewables can address the challenges of electricity generation and access.⁶³ It outlines plan for power generation using biomass, solar, wind and hydropower, and a number of strategies such as improved learning and research & development on renewable energy technologies.⁶⁴ For the realization of renewable electricity objectives, REM addresses issues that are peculiar to the development of renewable energy: legal, regulatory and institutional framework, financial and fiscal incentives, capacity building (human and infrastructural), renewable portfolios and feed-in-tariffs.⁶⁵ REM does not differentiate between on-grid and off-grid power generation thereby making its implementation difficult. REM remains in draft form till date.⁶⁶

⁵⁴ Electric Power Sector Reform Act 2005 s 76.

⁵⁵ Vincent Emodi, "Energy Policies for Sustainable Development Strategies: The Case of Nigeria" (Springer, 2016), p. 52.

⁵⁶ Federal Environmental Protection Agency, "Draft Revised National Policy on the Environment" (Presidency, 1998).

⁵⁷ ECN, *National Energy Policy* (n 19) 2; Ibibia L Worika, 'Rural Applications' in Richard Ottinger et al., *UNEP Handbook for Drafting Laws on Energy Efficiency and Renewable Energy* (United Nations Environmental Programme (UN Environment), 2016), p. 269.

⁵⁸ ECN, *National Energy Policy* (n 19) 1.

⁵⁹ *Ibid.* 1, 8.

⁶⁰ ECN, *Energy Implications of Vision 20: 2020 and Beyond* (n 39) 19.

⁶¹ *Ibid.* 61.

⁶² ECN, *National Energy Policy* (n 19) 36, 45, 64.

⁶³ Energy Commission of Nigeria (ECN), *Renewable Energy Master Plan 2005*.

⁶⁴ *Ibid.* 26–32.

⁶⁵ *Ibid.* 5–6, 23–4.

⁶⁶ International Renewable Energy Agency, "Policies and Regulations for Renewable Energy Mini-Grids," (November 2018), p. 24.

Next, the GoN in 2006 introduced the Renewable Electricity Policy Guideline (REPG).⁶⁷ REPG sets out the Nigeria's vision for renewable electricity through policy guidelines and establishment of structures for the exploitation of renewable energy resources for electricity generation.⁶⁸ The vision statement of the REPG is "the achievement of accelerated sustainable development through increased share of renewable electric power to the national electricity supply."⁶⁹ It recognizes the potentials of renewable energy resources in the NEP as well as the necessity of diversifying the country's electricity generation sources.⁷⁰ REPG proposes the use of renewables for electricity production in order to meet the country's electricity demand. In the area of funding, REPG establishes the Renewable Electricity Trust Fund to support renewable electricity and the use of small-scale renewables in improving rural electrification.⁷¹

The year 2015 opens a new chapter regarding the development of renewable energy with Nigeria approving the National Renewable Energy and Energy Efficiency (NREEEP) as a policy document. NREEEP is a high-level policy document that supersedes all the previous policy documents on the use of renewable energy in the electricity sector.⁷² NREEEP targets the "optimal utilization of the nation's energy resources for sustainable development" and provides economic justifications for the inclusion of renewable in the nation's energy mix.⁷³ N recognizes the frameworks in the Nigeria's Vision 20:20 Report and classifies energy supply into two broad categories: urban and the rural energy supply.⁷⁴ Electricity to urban areas will be supplied through the grid, while the rural areas will benefit from off-grid electricity through the utilization of RE resources in the rural areas.⁷⁵ For the first time, Nigeria understands the impossibility of supplying electricity to all parts of the country through the grid alone. By this, NREEEP depicts a clear understanding of one of the fundamental challenges of grid electricity in Nigeria. In order to aid the use of renewables for electricity generation, NREEEP provides for the use of mandatory or voluntary renewable portfolio standard, power production tax credit, feed-in tariff, bidding, net-metering and tax incentives for renewable energy projects.⁷⁶ Though a crucial policy document in the development of renewable energy, poor implementation and the absence of a dedicated law remain major challenges to the implementation of NREEEP. For instance, whilst NREEEP provides for the use of a sovereign guarantee to promote renewable-sourced electricity, it does not provide additional details on the implementation of this mechanism.⁷⁷ As a result, there is a limit to the effectiveness of NREEEP in solving the challenges of energy security in Nigeria.⁷⁸

In the exercise of its powers in the EPSR Act, NERC in 2015 approved the feed-in tariff regulation ("REFiT") to promote electricity generation from renewables. To date, REFiT remains an important mechanism for promoting uptake of renewable electricity in Nigeria. It serves as an economic instrument aimed at promoting investment in electricity generation from renewable energy source in Nigeria. With REFiT, Nigeria plans to attract investments for 2000MW of electricity from solar, wind, biomass, and small hydro by 2020.⁷⁹ REFiT aims at promoting priority access in connecting renewable electricity to the grid as well as concessions for renewable electricity within the grid.⁸⁰ There is also guaranteed minimum prices for renewable electricity and mandatory

⁶⁷ FMPS, *Renewable Electricity Policy Guidelines* (n 43).

⁶⁸ *Ibid.* 3.

⁶⁹ *Ibid.* 4.

⁷⁰ *Ibid.* 3, 13 and 16; Worika, *Rural Applications* (n 49) 269.

⁷¹ Worika, (n 49) 269; Yemi Oke, "Beyond Power Sector Reforms: The Need for Decentralised Energy Options (DEOP's) for Electricity Governance in Nigeria" (2015).

⁷² FMP, *National Renewable Energy and Energy Efficiency Policy* (n 33) viii; Dalberg Global Development Advisors, "Improving Access to Electricity Through Decentralised Renewable Energy, Policy Analysis from India, Nigeria, Senegal and Uganda" (2017), p. 47.

⁷³ FMP, *National Renewable Energy and Energy Efficiency Policy* (n 33) 67.

⁷⁴ *Ibid.* iv, 7, 10.

⁷⁵ *Ibid.* viii.

⁷⁶ *Ibid.* 4.

⁷⁷ *Ibid.* 21; Dalberg Global Development Advisors (n 66) 56.

⁷⁸ Dalberg Global Development Advisors (n 66) 56.

⁷⁹ NERC, *Regulation on Feed in Tariff s 4(i)(a)*.

⁸⁰ Nigerian Electricity Regulatory Commission (NERC), *Regulation on Feed-in Tariff for Renewable Energy Sourced Electricity in Nigeria* (2015) ss 3, 8(f); Nigerian Electricity Regulatory Commission, 'Renewable Energy Sourced Electricity' <<http://www.nercng.org/index.php/home/operators/renewable-energy>>.

purchase obligations. Later in 2016, Nigeria complements its sustainable energy drive by endorsing the Sustainable Energy for All Action Agenda (“SEA4ALL-AA”). SE4ALL-AA embodies the Nigeria’s vision 30:30:30 for the electricity sector. By the vision, Nigeria plans to generate 30GW of electricity by 2030 with not less than 30% RE component by 2030.⁸¹ It captures Nigeria’s specific goal for electricity generation in the context of the broader global sustainable development goals. There are three cardinal objectives of the SE4All-AA: (a) energy access; (b) energy efficiency; and (c) RE.⁸² The plan is to increase the contribution of on-grid renewable energy-sourced electricity to 48% and 70% by 2020 and 2030 respectively.⁸³ In addition, NREEEP aims at increasing electricity access to at least 75% by 2020 and 90% by 2030 with not less than 10% renewable energy component in the energy mix.⁸⁴

In law and the policy, the inclusion of renewable energy in the electricity mix for sustainable energy is firmly established. The aim is not to generate electricity from renewables alone. Rather, both in law and the policy the focus is on the inclusion of electricity from renewable energy sources in the electricity mix to address the frequent break down in electricity supply on account of disruption on gas supply and or hydro.⁸⁵

A CASE FOR AN AFFIRMATIVE RENEWABLE ENERGY LAW IN NIGERIA

Historically, the role of law in the field of energy is conceived as limited to the consideration of law and regulations for the exploitation of conventional energy.⁸⁶ The regulatory role of law has, however, changed following the developments in the electricity industry worldwide. Law now covers the entire aspects of the electricity industry and other aspects of the energy sector including the development of renewable energy.⁸⁷ Law “acts as a policy enabler,” it aligns the provisions of the energy policy with the law.⁸⁸ In other words, law provides a binding precept for electricity energy policy statements. Although, the practice in some countries is to develop a policy for the regulation and exploitation of renewable energy resources for electricity generation, law is still required to provide legal support for the policy. Law and the policy belong to different realms in the regulation of energy.⁸⁹ Policy represents a statement of government’s direction in the energy sector, and its bindingness depends on the law.⁹⁰ Law can be employed in aid of fiscal incentive policy for the promotion of renewable electricity.⁹¹

The experience of countries that have enacted renewable energy law underscores the importance of law in the application of fiscal incentives. In cases where these incentives are contained in policy documents, law is still required to make the incentives binding and enforceable.⁹² Furthermore, law creates enforceable agreements that help in removing uncertainties in the energy market. Without a law to compel the adoption of renewable energy technologies, developers may ignore these (new) technologies for the conventional energy technologies.⁹³ As stated by

⁸¹ Energy Commission of Nigeria, “Nigerian Sustainable Energy for All (SE4ALL) Action Agenda: Electricity Vision 30:30:30,” (Energy Commission of Nigeria) <http://www.se4all.ecreee.org/sites/default/files/nigeria_se4all_action_agenda-energy_mix_chart.pdf>.

⁸² NACOP, *Sustainable Energy for All Action Agenda* (n 13) 11–2.

⁸³ *Ibid.* 31, 37, 40.

⁸⁴ *Ibid.* 29.

⁸⁵ ECN, *National Energy Policy* (above n 8) 36.

⁸⁶ Adrian J. Bradbrook, “Energy Law as an Academic Discipline” (1996) 14(2) *Journal of Energy and Natural Resources Law* vol. 14 no. 2 (1996), p. 193; Raphael J. Heffron and Kim Talus, “The development of energy law in the 21st century: a paradigm shift?,” *Journal of World Energy Law and Business* (2016), p. 3.

⁸⁷ Omorogbe, ‘Promoting Sustainable Development through the Use of Renewable Energy’ (n 26); Heffron and Talus, ‘The Evolution of Energy Law and Energy Jurisprudence’ (n 149) 1–2; Raphael J. Heffron, Anita Rønne, Joseph P. Tomain, Adrian Bradbrook and Kim Talus, ‘A Treatise for Energy Law’ (2018) 11 *Journal of World Energy Law and Business* 34, 35.

⁸⁸ Omorogbe, *The Role of Law in Promoting Renewable Energies in Africa* (n 3) 219.

⁸⁹ *Ibid.* 215.

⁹⁰ *Ibid.* 215, 219.

⁹¹ Yinka Omorogbe, ‘Promoting Sustainable Development through the Use of Renewable Energy: The Role of the Law’ in Donald N. Zillman (eds), *Beyond Carbon Economy: Energy Law in Transition* (Oxford, Oxford University Press, 2008), p. 45.

⁹² Yinka Omorogbe, *The Role of Law in Promoting Renewable Energies in Africa* (n 3) 215, 219.

⁹³ H. Wiseman, L. Grisamer, and E. N. Saunders, “Formulating a Law of Sustainable Energy: The Renewables Component,” *Pace Environmental Law Review* vol. 28 (2011), p. 829.

von Danwitz, renewable energy technologies are new technologies that cannot develop without a legal regime dedicated to their development.⁹⁴ So, leaving the regulation of renewable energy resources and technologies to market forces may create uncertainty in the energy markets.⁹⁵ Lastly, law aids the development of commercially exploitable renewable resources. In practice, it is not every renewable energy resource that can be exploited in commercial quantity.⁹⁶ For renewables that exist in commercial quantities, it is law that will guide their exploitation in a manner that balances economic and environmental interests in addition to ensuring human safety.⁹⁷

The change in the role of law emanates from the worldwide privatization and liberalization witnessed in the electricity sector in the last two decades.⁹⁸ Law now plays an important role in providing a distinct regulatory regime for the exploitable of renewables. Despite the importance of renewable energy resources, Nigeria has not sustainably harnessed its renewable resources for electricity generation.⁹⁹ A key reason for this is the absence of a law to drive country's renewable electricity objectives. As will be seen later in this article, renewable electricity objectives and targets have not been driven by effective law reform.¹⁰⁰

Although the EPSR Act remains the main driver of Nigeria's renewable electricity objectives, its' provisions have failed to drive the achievement of the Nigeria's sustainable/renewable electricity objectives. It lacks basic provisions that can promote the uptake of renewable energy in the various energy/renewable energy policy documents. The EPSR Act targets electricity generation from all energy sources. By this provision, Nigeria will generate electricity from both fossil energy and non-fossil energy sources. However, renewable energy technologies are a new area in Nigeria that is still emerging. As stated earlier, renewable energy technologies require a dedicated law to compel their use. The focus of the EPSR Act is not the promotion of renewable energy resources. The preamble to the EPSR Act leaves no one in doubt as to what the Act sets out to achieve, which is essentially the reform of the electricity sector. Since the development of renewable energy is not one of the focus areas of the EPSR Act, important provisions such as green funding for renewable energy, renewable energy portfolio, support mechanisms (feed-in tariff, net metering, etc.), priority access for renewable electricity, etc., are not provided for in the EPSR Act.

With the focus of the EPSR Act, there is a disconnection between Nigeria's energy policy objectives and the provisions of the EPSR Act. Although the EPSR Act enjoins NERC to promote optimal utilization of resources for electricity, it does not provide specific guidance on the exploitation of renewable energy resources.¹⁰¹ The only reference to renewable energy in the EPSR Act is restricted to power production for the rural electrification program. The restriction in the provisions of section 88(9) a negation of the Nigeria's renewable electricity objectives in the policy documents which may inhibit a wider application of renewable energy. Aigbovo and Ogboka describe the EPSR Act as "a dis-incentive to potential investors in the sector" as far as promotion of electricity from renewable energy source is concerned.¹⁰²

Since the EPSR Act does not target renewable-sourced electricity generation, it does not impose an obligation to promote the use of renewable energy on any of the bodies mentioned in the Act, that is NERC and the Federal

⁹⁴ Thomas von Danwitz, "Regulation and Liberalization of the European Electricity Market – A German View," *Energy Law Journal* vol. 27 (2006), p. 432.

⁹⁵ Allan E. Bollard and Michael Pickford, "New Zealand's 'Light-Headed' Approach to Utility Regulation," *AGENDA* vol. 2 (1995), p. 411.

⁹⁶ Adrian J. Bradbrook, "Sustainable Energy Law: The Past and the Future," *Journal of Energy and Natural Resources Law* vol. 30 (2012), p. 515.

⁹⁷ Adrian J. Bradbrook, "Energy and Sustainable Development," *Asia Pacific Journal of Environmental Law* vol. 4 (1999), p. 311.

⁹⁸ Adrian J. Bradbrook, "The Development of Renewable Energy Technologies and Energy Efficiency Measures through Public International Law," in D. N. Zillman (eds), *Beyond the Carbon Economy: Energy Law in Transition* (Oxford University Press, 2008), p. 109.

⁹⁹ Carlos Pestana Barros, Ade Ibiowie, and Shunsuke Managi, "Nigeria's Power Sector: Analysis of Productivity," *Economic Analysis and Policy* vol. 44 (2014), p. 65.

¹⁰⁰ Chukwuka G. Monyei, Aderemi O. Adewumi, Michael O. Obolo, and Barka Sajou, "Nigeria's Energy Poverty: Insights and Implications for Smart Policies and Framework Towards a Smart Nigeria Electricity Network," *Renewable and Sustainable Energy Review* vol. 81 (218), p. 1586.

¹⁰¹ Electric Power Sector Reform Act 2005 s 32(a).

¹⁰² Osaretin Aigbovo and Ebiton Ogboka, "Electric Power Sector Reform Act 2005 and the Development of Renewable Energy in Nigeria," *Renewable Energy Law and Policy Review* vol. 7 (2016), pp. 20–21.

Ministry of Power (FMP).¹⁰³ NERC and the FMP have developed strategies to promote uptake of renewable energy for electricity generation, particularly in the area of policy formulation.¹⁰⁴ NERC has prepared the REFiT while the FMP has prepared the REPG among other policy documents. Each of these documents seeks to establish a policy framework for the development of renewable energy in Nigeria without reference to the powers of the other bodies. As a result, there is usually an overlap of functions and conflict of responsibilities among the regulators. A manifestation of this conflict was witnessed prior to the inauguration of the REFiT in 2015. The Nigerian Bulk Electricity Trading Company (NBET) had argued that the powers of NERC in the EPSR Act did not cover regulation making, and as a result NERC would be exercising powers above what the EPSR Act conferred on it.¹⁰⁵ The omission to establish a specific body both in law and the policy for the development of renewable energy is a fundamental gap in the development of renewable energy in Nigeria.¹⁰⁶ This has made accountability on the state of development of renewables for electricity generation in Nigeria difficult.¹⁰⁷

The EPSR Act has also not advanced the objectives of the REFiT in Nigeria. Generally, feed-in tariff usually imposes a legal obligation on off-takers of electricity to purchase renewable energy-sourced electricity on a priority basis and accompanied by priority access to the grid. In Nigeria, REFiT grants prioritized grid connection to renewable energy-sourced electricity. However, the EPSR Act provides for non-discrimination in connecting renewable electricity to the national grid.¹⁰⁸ The rationale behind the non-discriminatory provisions in the EPSR Act is to make the electricity sub-sector more competitive.¹⁰⁹ As a result of the non-discriminatory provision in the EPSR Act, renewable electricity does not enjoy a special status as envisaged by the prioritized grid connection access in the REFiT. Although the rationale behind the non-discrimination provisions is to make the electricity sub-sector more competitive,¹¹⁰ the absence of prioritized access to the network is a major challenge affecting the introduction of renewable-sourced electricity to the Nigeria electricity market.¹¹¹ As a result of the non-discrimination provisions for both network access and grid connection, renewable electricity does not enjoy a special status as envisaged by the prioritized access in the REFiT.

Furthermore, a careful look at the regulatory framework for electricity in the EPSR Act shows the existence of a centralized electricity regulatory regime as opposed to the division of powers over electricity function in the constitution.¹¹² NERC, the sole regulator of electricity in the EPSR Act, is under the control and supervision of the Federal Government with powers over all the states of the Federation.¹¹³ The centralization of the regulatory functions of NERC does not take into consideration, the powers of the states over electricity not transmitted

¹⁰³ The Electric Power Sector Reform Act gives the Ministry certain oversight powers over the electricity industry. See Electric Power Sector Reform Act 2005 ss 24, 27, 28.

¹⁰⁴ Energy Commission of Nigeria Act ss 4(a)(d)(e)&(h) and 33; Energy Commission of Nigeria, “Energy Commission of Nigeria’s Mission Statement” <http://www.energy.gov.ng/index.php?option=com_content&view=article&id=78&Itemid=89>; Peter K. Oniemola, “Powering Nigeria through Renewable Electricity Investment: Legal Framework for Progressive Realization,” *Afe Babalola University Journal of Sustainable Development, Law and Policy* vol. 2 no. 1 (2015), p. 89.

¹⁰⁵ Chris Ochayi, “NERC, NBET disagree over renewable energy policy,” (Vanguard, 18 August 2015) <<https://www.vanguardngr.com/2015/08/nerc-nbet-disagree-over-renewable-energy-policy/>>.

¹⁰⁶ Kenneth E. Okedu, Roland Uhumwangho and Promise Wopara, “Renewable Energy in Nigeria: The Challenges and Opportunities in Mountainous and Riverine Regions” *International Journal of Renewable Energy Research* vol. 5 no. 1 (2015), p. 224.

¹⁰⁷ E. L. Efurumibe, “Barriers to the development of renewable energy in Nigeria,” *Journals of Biotechnology* vol. 2 no. 1 (2013), pp. 11–12.

¹⁰⁸ Electric Power Sector Reform Act 2005 s 82(4)&(5).

¹⁰⁹ Maria Vagliasind, “Implementing Energy Subsidy Reforms: Evidence from Developing Countries” (World Bank, Washington, DC 2013), p. 248.

¹¹⁰ The rationale behind the non-discrimination provisions is to make the electricity sub-sector more competitive.

¹¹¹ Kaisan Muhammad Usman, Aminu Haruna Isa and Johnson Oluyemi Ojoso, ‘Renewable Energy Financing: Towards a Financing Mechanism for Overcoming Pre-Commercialization Barriers of Renewable Energy Financing System in Nigeria’ *International Journal of Scientific & Engineering Research* vol. 3 no. 4 (2012), p. 3.

¹¹² Yemi Oke, ‘Conflicting Laws Keep Nigeria’s Electricity Supply Unreliable’ (*The Conversation*, 24 August 2017) <<https://theconversation.com/conflicting-laws-keep-nigerias-electricity-supply-unreliable-81393>>.

¹¹³ Electric Power Sector Reform Act 2005 ss 31, 32; Yemi Oke, Conflicting Laws Keep Nigeria’s Electricity Supply Unreliable (n 104).

through the grid.¹¹⁴ The reality is that monopoly of regulatory structure in the EPSR Act may curtail the powers of the states regarding the development of renewable energy for electricity generation rather than expanding it.¹¹⁵ The centralization of electricity functions can be traced to the political structure that was introduced in 1966 following the first military coup in Nigeria. Prior to 1960 and up to 1966, Nigeria operated a regional system of government whereby powers over policy decisions resided in the regional governments. The military government, after taking over in 1966, in a bid to exercise control over every sector of the Nigerian economy, changed the existing political structure and introduced a single structure political system including control and governance of energy resources.¹¹⁶ This gave the (central) federal government powers to regulate and take decisions on all matters including energy. Since then successive governments in Nigeria (including democratically elected government) have retained the centralized political structure with attendant effect on the regulation of electricity.

As a result of the above-mentioned points, law and the policy in Nigeria have failed to advance the sustainable use of renewable energy for electricity generation. Looking at the actualization of the renewable electricity targets so far, there has not been any impressive result. Nigeria has failed to actualize nearly all the pre-2020 targets, whilst the actualization of the year 2020 targets and beyond remains doubtful.¹¹⁷ The major reason is that law in Nigeria has failed to align with the renewable energy objectives in Nigeria. Uma Outka aptly captures the challenges of law on the development of renewable energy as either the case of absence of an affirmative law to support the development of renewable energy or the “existing law fashioned in support of a pre-renewables energy sector.”¹¹⁸ As Omorogbe rightly observed, the bane of renewable energy in many African countries is the absence of law to drive energy policies.¹¹⁹ This is because the failure of any government to put in place the appropriate legal structure will not only “lead to a distorted legal environment” but also a policy failure: without law, energy policy is ineffective.¹²⁰

Considering all of these factors, the EPSR Act, as it stands, is not likely to serve any further useful purposes as far as the Nigeria’s aspiration of generating electricity from renewable energy sources for the sustainable development of the country is concerned. Nigeria needs to introduce a law that will be dedicated to, and effectively support the promotion of renewable energy for electricity generation. The law in this area can be either a comprehensive law in the form of a new law or partial law in the form of amendments to the existing electricity/energy law to accommodate the development of renewable energy.¹²¹ While Nigeria could amend the EPSR Act to accommodate the implementation of a national renewable policy, it is in the best interests of the country to repeal the EPSR Act and enact a new law that is more suited to achieving the country’s renewable energy objectives. The proposed law will define the modalities and for the inclusion of renewable energy-sourced electricity, and ultimately ensure smooth transition from a predominantly fossil-fuel energy regime to a cleaner energy from renewable energy source. Doing this will go a long way in institutionalizing a carefully planned sustainable system of energy production and consequently addressing the challenges of energy security.

CONCLUSION

Given the current electricity mix composition, which is largely dominated by thermal sources (gas and hydro), there are more opportunities for Nigeria to explore the use of renewables for electricity generation. Electricity from renewable energy sources will promote energy security as well as sufficiency of energy supply.

¹¹⁴ Yemi Oke, *Conflicting Laws Keep Nigeria’s Electricity Supply Unreliable* (n 104).

¹¹⁵ Yemi Oke, “Challenges and Developments in the Nigerian Power Industry” (2014) *ALP Business Review-Energy* (2014), p. 22.

¹¹⁶ Nobert Edomah, Chris Foulds and Aled Jones, “The Role of Policy Makers and Institutions in the Energy Sector: The Case of Energy Infrastructure Governance in Nigeria,” *Sustainability* vol. 8 (2016), p. 9.

¹¹⁷ Eric K. Ogunleye, “Political Economy of Nigerian Power Sector Reform” in Douglas Arent (eds), *The Political Economy of Clean Energy Transitions* (Oxford University Press, 2017), pp. 391–92.

¹¹⁸ Uma Outka, “Environmental Law and Fossil Fuels: Barriers to Renewable Energy,” *Vanderbilt Law Review* vol. 65 (2012), pp. 1681–82.

¹¹⁹ Yinka Omorogbe, *Promoting Sustainable Development through the Use of Renewable Energy: The Role of the Law* (n 89) 45.

¹²⁰ Yinka Omorogbe, *The Role of Law in Promoting Renewable Energies in Africa* (n 3) 219.

¹²¹ Bradbrook, *Sustainable Energy Law: the Past and the Future* (n 96) 511–12 & 514.

It is important for Nigeria to have a law dedicated to renewable energy in order to overcome barriers to the development of renewable energy. Having a renewable energy law will ensure there is legislative backing for renewable energy policy. Nigeria also needs to strengthen its energy policy so that a law will support the implementation of the country's energy policy. Some of the policy documents are time-based which makes their provisions inoperative with the passage of time. For instance, Nigeria's vision of increasing electricity capacity to between 25,000MW and 40,000MW by 2020 has just become a fiction. Electricity targets and renewable energy objectives in the various policy documents have failed, or will fail, due to an absence of law to translate the key provisions into more electricity. The proposed law should also ensure that connection of renewable-sourced electricity to the grid and the access to the network are prioritized. It is important for the development of renewable energy for electricity generation that electricity from renewables should have the privilege of priority of dispatch. The priority dispatch can be achieved by ensuring that an obligation is imposed on the Transmission Company of Nigeria the obligation to dispatch renewable electricity ahead of electricity from conventional sources. In this regard, the law should set out the conditions a renewable energy technology should meet before it can be dispatched ahead of electricity from the conventional sources.

In addition to priority of dispatch, a special connection regime should be established for renewable electricity different from the current law on access to network, which permits equal connection status for electricity from any sources. An important consideration in the area of connection in Nigeria is the issue of cost, which should be done in a way that will not make electricity from RE sources unattractive. Since the TCN (a government-owned company) is the owner of the transmission network, the connection costs could be fixed in a way that both the electricity generator and the TCN will bear the costs. This way, the burden of the costs of connection will not be borne by electricity consumers alone. GoN may also need to privatize the transmission network to make it more competitive and attractive to private investors. In the alternative, the transmission network can be decentralized to enable state participation in the operation of the transmission network. Through a clear-cut legal and regulatory framework, one that gives preference to electricity generation from renewable energy source, Nigeria can promote sustainable use and exploitation of renewable energy resources for electricity generation.¹²²

¹²² United Nations Department of Economic and Social Affairs, "Improving sustainable energy access for rural areas," (8 January 2014) <<http://www.un.org/en/development/desa/news/sustainable/rural-energy-access.html>>.