

Energy Resources Governance for National Development: Options for Socially Sustainable Electricity Generation, Transmission and Distribution in Nigeria

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Abstract

The provision of low-cost, affordable and regular electricity is crucial to industrial development, employment generation and poverty alleviation in Nigeria. To this extent, the power sector of Nigeria has recently witnessed major policy re-directions, which are intended to reposition it for better efficiency through private players and by streamlining the regulatory and supervisory roles of government and its agencies. The Nigerian government believes very strongly that the new initiative will help to create a paradigm shift in a sector replete with regulatory overlaps, under-productivity and administrative laxities. While commending reform initiatives in the power sector of Nigeria, a careful look at the reformed electricity sector leaves one with an impression that the new policy is yet to sufficiently reflect the trends of sustainable electricity governance in other countries where similar reforms had taken place. This article reviews primary and secondary legal instruments, the Electric Power Sector Reform Act of 2005 (EPSR) and the Regulations (Electricity Regulations made pursuant to the EPSR Act). It throws-up the inadequacies of the current (reformed) electricity regime to the extent that some of its provisions violate certain sections of the Nigerian Constitution, and are inherently contradictory.

Introduction

The word ‘development’ is vague and general term ‘law’ is scarcely more precise.¹ Law is incapable of a precise or generally agreed definition.² There is also no common ground as to when a country is developed or undeveloped as “development” is viewed from different perspectives and contexts.³ Notable scholars of law and development have, however, advocated a suitable model capable of accelerating socio-economic development of Nigeria, particularly in the areas of electricity and infrastructure. The underlining idea of the theory of law and development is that: “*Development cannot proceed save in a reasonably stable political and legal environment. Private capital will not invest in a country whose legal order does not possess a high degree of predictability. The private sector cannot advance unless long-range planning can be made effective, and effective long-range planning requires the same degree of predictability as does the private sector*”.⁴

¹ See Elliot M. Burg, “Law and Development: A Review of Literature and a Critique of “Scholars in Self-Estrangement” (1977) 25 *The American Journal of Contemporary Law*, 492 at 504.

² See Robert B. Sheidman, “Law and Economic Development in English-Speaking, Sub-Saharan Africa” (1966) *Wisconsin Law Review*, 999 for overview of “law” as defined by Kelsen, Pound, and other schools of thought, at 999-1001.

³ See Elliot Burg, *supra* note 1, at 502-505.

⁴ See Robert B. Sheidman, *supra* note 2, at 1062.

To a great extent, Nigeria, like other African countries, has become a country of legalisms rather than legality.⁵ The new laws now multiplying in Nigeria and other countries in the region are *elitist*. Most of those enactments embody not what the people at large desire, but what a tiny minority of those in power, whether as politicians, legislators, soldiers, civil servants or “leaders of thoughts”, have decided was most suitable for the people.⁶ This is the case of the Nigerian electricity law and regulation.

Modern scholars of the theory of law and development seem to be de-emphasising law as a magic wand for development. Scholars’ focuses have shifted from legalism to getting the institutions right.⁷ This entails judicial reforms, effective law enforcement mechanisms, elimination of corruption and other correlative factors inimical to socio-economic development.⁸ Getting the institutions right appears much more crucial to realising the objective of the reformed power sector of Nigeria. Regrettably, research outcomes (some of which are published in the book and several learned journals cited below) reveal that Nigeria needs to get both the law and institutions right to realise the lofty objectives of the new power sector era.⁹

Literature Review

Overview of the Reformed Power Sector in Nigeria

The history of electricity in Nigeria dates back to 1896 under the colonial rule when electricity was first produced in Ijora, Lagos by the British Colonial Government.¹⁰ The Nigerian Electricity Supply Company (NESCO) was later established and commenced operations in 1929.¹¹ In 1946, the Colonial Government took over electricity governance by establishing the Public Works Department (PWD). The PWD took over the responsibility of electricity supply in Lagos. Four years later, precisely in the year 1950, the *Electricity Corporation of Nigeria* (ECN) was created pursuant to the Electricity Corporation Ordinance 1950¹² while the *Niger Dams Authority* (NDA) was also established about the same time by an Act of Parliament.¹³

Fusion of generation and transmission began formally in Nigeria in April 1, 1972 when amalgamation of the two existing organisations, namely the ECN and the NDA was effected by a military decree¹⁴ to form the *National Electric Power Authority* (NEPA). NEPA was exclusively responsible for generation and distribution of electricity in Nigeria. After about four decades, NEPA unsuccessfully managed electricity generation, transmission and distribution in Nigeria and was unbundled and divided into eighteen new companies and semi-autonomous business units under the

⁵ *Ibid*, at 1023.

⁶ Allot, Anthony, “The Unification of Laws in Africa” (1968) 16 *American Journal of Contemporary Law* pages 51, at 52-53.

⁷ See Kevin E. Davis, “How Important is the Legal System?” *Law and the Developing World: Can Law Alleviate Despair*, University of Toronto, *Nexus*, Spring/Summer (2003) at 18.

⁸ *Ibid*.

⁹ See generally MJS Partners, “Update On Sale Of Generation Companies (Gencos) And Distribution Companies (DISCOS)”, *MJS Quarterly Newsletter of Nigerian Electricity Law and Regulation*, Volume 1, Number 3, 2012, available on-line at: <http://www.pgey.com/index.php?m=Index&a=down&type=pdf&title=NIGERIAN%20GOVERNMENT%20DREGULATES%20ELECTRICITY%20E2%80%A6&src=http%3A%2F%2Fxa.yimg.com%2Fkq%2Fgroups%2F27065299%2F2134166051%2Fname%2FMJS%2BNEWS%2BLETTER%2BVol%2B1.pdf> accessed August 30, 2014.

¹⁰ Niger Power Review: “Development of Electricity Industry in Nigeria (1960-1985)”, 1985, pp. 1-6.

¹¹ See *Electricity Ordinance Act of 1929*.

¹² See *Electricity Corporation Ordinance No. 15 of 1950*.

¹³ Manafa, N.: *Electricity Development in Nigeria*, Rasheen Publisher, Lagos, 1995, pp. 37-51

¹⁴ See the *National Electric Power Authority Decree No. 4, 1972*.

now dissolved initial holding company called the *Power Holding Company of Nigeria* (PHCN).¹⁵

Under the new regime, the Nigerian Electricity Regulatory Commission (NERC) is to serve as the main regulatory body. The existence of NERC is brought about by the *Electric Power Sector Reform Act*.¹⁶ The current regime of power sector reform began in 2000 with the implementation of the Electric Power Implementation Committee (EPIC). The committee drafted the *National Electric Power Policy* (NEPP) in 2001 leading to the EPSR Act 2005.¹⁷ The model of electricity governance in Nigeria under the *National Electric Power Authority* (NEPA) is radically different from the regime of the EPSR Act.¹⁸ A major difference is that the *NEPA Act* intended a wholly state-owned and government-controlled electricity sector in Nigeria.¹⁹ NEPA merely served as a statutory body to effectuate state monopoly in the sector.²⁰ The *EPSR Act* expressly provides for a liberalised regime of electricity, and promotes competition and level playing field in the power sector. It embraces radical, private sector involvement by way of direct and indirect investments, including technical partnerships with the Nigerian government.²¹ The new regime makes a sharp departure from the old paradigm of state monopoly in electricity governance in Nigeria.²² A crucial question is: **despite the reforms, how socially sustainable is electricity governance in Nigeria?**

Some Legal and Constitutional Concerns

In a number of ways, the provisions of the *Electric Power Sector Reform Act* 2005 (the Act) would appear to contradict the *Constitution of the Federal Republic of Nigeria* (as amended). The Nigerian constitution provides for electricity regulation under items 13 and 14 of the Second Schedule, Part II, Concurrent Legislative List to the extent that: *The National Assembly may make laws for the Federation or any part thereof with respect to-(a) electricity and the establishment of electric power stations; (b) the generation and transmission of electricity in or to any part of the Federation and from one State to another State.*

A potential challenge in the sector is that, by virtue of paragraph 14, State Governments in Nigeria are at liberty to engage in licensing and regulation of electricity subject as provided by the Constitution. Item 14 states that: *A House of Assembly may*

¹⁵ The commercialisation and privatisation regime had listed NEPA as one of the state enterprises to be commercialised. See the *Commercialisation and Privatisation Decree No. 25, 1988*.

¹⁶ See section 31 of the *Electric Power Sector Reform* (EPSR) Act 2005, Cap E7, Laws of the Federation of Nigeria (LFN), 2004 (Revised 2010).

¹⁷ Ibid.

¹⁸ See the *National Electric Power Authority* (NEPA) Act, Cap N 33, Laws of the Federation (LFN) 2004.

¹⁹ See Yemi Oke, "Beyond Power Sector Reforms: The Need for Decentralised Energy Options (DEOPs)" (2012) 18:1 *Nigerian Journal of Contemporary Law, University of Lagos*, 67 at 68-71. See also Yemi Oke, "National Grid or National Greed", *The Punch Newspaper* (7 December 2011) 14 and (8 December 2011) 16. See also Chigbue, I.N., "Electric Power Sector Reform: Privatization, Regulation and Other Challenges" a presentation at the National Workshop on Electric Power Sector Liberalisation, 30th March, 2006, on-line at: <http://worldstagegroup.com/truecolour/media/11152404144.ppt>, accessed April 18, 2013.

²⁰ See for example, sections 1 and 3 of the NEPA Act, *supra* note 18.

²¹ See Yemi Oke, "Manitoba Hydro and Electricity Undertakings in Developing Countries: The Case of Nigeria" (2012) 36: 1 *Manitoba Law Journal*, at 37-65.

²² See sections 25, 26, 28, 29, and 82 of the EPSR Act, *supra* note 16. For example, sections 80 and 81 of the *EPSR Act* provide for consumer protection, and require high performance standards by the operators to engender maximum utility and safety to consumers of electricity. Regrettably, section 27 of the repealed NEPA Act declares that NEPA is not responsible for safety either of the consumers or for the efficiency or safety of their cables and appliances of consumers. Section 35 of the NEPA Act forbade any other person or state government agency from obtaining licenses to operate power plants or generate electricity, in contradistinction with the level-playing, competitive structure under the EPSR Act of 2005.

make laws for the State with respect to – (a) electricity and the establishment in that State of electric power stations; (b) the generation, transmission and distribution of electricity to areas not covered by a national grid system within that State; and (c) the establishment within that State of any authority for the promotion and management of electric power stations established by the State.

Apparent from the above section is that the Nigerian Constitution provides for decentralised electricity governance. It is therefore curious why State Governments in Nigeria are yet to direct their attention to this gap.²³ While the Constitution provides for decentralised regulatory framework, the EPSR Act provides for a centralised regime, which is outside the contemplation of the Constitution, thus making it null and void to the extent of its inconsistency.²⁴ The Act also established an agency, to be known as the *Rural Electrification Agency* (REA).²⁵ The REA administers the *Rural Electrification Fund* (REF), a designated fund to provide, promote and support rural electrification programmes which ordinarily comes within the ambit of off-grid electricity structure for State regulation.

i) Rural Electricity:

Rural electricity is off-grid, and comes squarely within the ambit of regulatory purviews of the State Governments in Nigeria²⁶ bearing in mind that the Constitution vests Local Government administration in the state Governments.²⁷ The objective and purpose of the REF is a noble one, at least on paper, and are similar to that of the regulatory agency, the REA.²⁸ However, noble as its objectives might seem, the REF has generated more ripples than intended in its short history due largely to corruption and mismanagement of the REF.²⁹ This indeed, vesting *Rural Electrification Agency* (REA), *Rural Electrification Fund* (REF), and *Rural Electrification Project* (REP) in the hands of the Federal Government runs counter to the intendment of the Nigerian Constitution. An attempt to bring ‘off-grid’ subject within “National-Grid” is tantamount to what can aptly be called “National Greed”.³⁰

ii) Captive power generation

Power to regulate captive electricity generation should ordinarily vest in the State Governments. Therefore, the *NERC Regulations for the Granting of Permits for Captive Power Generation*, 2008³¹ is, *ipso facto*, unconstitutional. Under this regulation, the NERC grants captive electricity permits to an individual, a company, partnership or any association of individuals whether incorporated or not.³² The word “*Captive Power Generation*” means *generation of electricity in excess of one (1) MW for the purpose*

²³ See items 13 and 14 on Electric Power (F), in the Second Schedule, *Part II, Concurrent Legislative List, Constitution of the Federal Republic of Nigeria* (CFRN) 1999 (as amended).

²⁴ Ibid, section 1 (1) and (3) of the CFRN, 1999 (as amended).

²⁵ S. 88 (1) of the EPSR Act, *supra* note 16.

²⁶ See Item 14, of the Schedule II to the CFRN, *supra* note 23.

²⁷ Section 6 (7) CFRN 1999 (as amended).

²⁸ See section 88 (13) (a-d) of the EPSR Act, *supra* note 16.

²⁹ The arrest of some principal officers of the National Assembly over the *Rural Electricity Project* by the *Economic and Financial Crimes Commission* (EFCC) has further reinforced the argument on the current structure of the electricity governance in Nigeria. See “The Raging Scandal over Government’s Rural Power Projects” Guardian online at: <http://www.nguardiannews.com/weekend/article01//indexn2.html?pdte=150509&ptitle=The%20raging%20scandal%20over%20govt's%20rural%20power%20projects> accessed June 17, 2009.

³⁰ See Yemi Oke “National Grid” or “National Greed”? *supra* note 19.

³¹ The *Nigerian Electricity Regulatory Commission (NERC) Regulations for the Granting of Permits for Captive Power Generation*, 2008 is made pursuant to Section 96 (1) of the Electric Power sector Reform Act, 2005 which gives the Commission power to make regulations for the granting of permits for captive power generation.

³² See section 2 of the Regulations. The section defines ‘person’ to include an individual, a company, partnership or any association of individuals whether incorporated or not.

of consumption by the generator, and which is consumed by the generator itself, and not sold to a third-party".³³ The underlining objective of the regulation is to streamline the procedure for power generation by interested person(s), groups or corporate organisation in excess of 1 MW, but without the intention of trading or engaging in the sale of electricity to a third-party.

There is no direct or specific provision under the Act authorising the NERC to regulate captive generation of electricity. Section 62 of the EPSR Act expressly excludes captive generation. It only provides that no person shall construct, own or operate an undertaking for the purpose of electricity generation, transmission, distribution, systems operation or electricity trading in excess of 1 megawatt without a licence by the Commission.³⁴ Thus, even under section 32 (1) (a), 32(1) (e), and 32 (2) (d) of the Act, the NERC has a general but not specific statutory duty to regulate the operation of captive generating plant, among others.³⁵ Like the REA, REF and REP; captive generation of electricity is also off-grid, and comes within the ambit of legislative competence and regulatory purviews of the State Governments in Nigeria, in line with the intendment of the Constitution. As the sector develops, it is anticipated that State Electricity Regulatory Commissions would be established by interested State Governments in Nigeria to license private companies to engage in off-grid electricity generation, transmission and distribution including renewable electricity, captive electricity generation, rural electrification and others. The ultimate objective is to ensure regular supply of power for economic development. Therefore, Federal and State Governments must act as collaborators, not as competitors, in terms of electricity governance in Nigeria.³⁶

iii) Revocation of land for electricity purpose

Revocation of land for electricity purpose is another potentially sensitive issue capable of undermining private sector-led electricity sector in Nigeria. The issue of land ownership and management is capable of generating tension between electricity companies and the local communities.³⁷ Land ownership is a sensitive subject under the Nigerian law. The EPSR Act provides that for the purpose of electricity, a generation licensee, transmission or distribution licenses, or a proposed licensee for generation, transmission and distribution services may apply to the NERC in a manner as may be prescribed, for a declaration that the land is required for purposes of generation, transmission or distribution of electricity.³⁸

The Commission may, subject to further conditions as it may specify, declare that the land identified by the licensee is so required, with such modifications to the boundaries as it may specify.³⁹ The exception granted for the purpose of a declaration requiring land for electricity purpose may include a condition that the physical environment be protected, and that there is no greater damage to the streets or interference with traffic that is reasonably necessary. The Governor, as custodian of

³³ See Section 2 (1) of the *Captive Power Generation Regulations*, *supra* note 31.

³⁴ See generally Section 62 (1) (a-e), (2) and (3) of the Electric Power Sector Reform Act, *supra* note 16.

³⁵ A careful reading of the provisions of section 32 (1)(a), 32(1)(e), and 32 (2)(d) of the Act shows that the NERC is vested with no specific but general powers to create, promote, and preserve efficient electricity industry including ensuring the safety, security, reliability and quality of service in the production and delivery of electricity to consumers as well as license and regulate persons engaged in the generation of electricity, transmission, system operation, distribution and trading of electricity.

³⁶ Yemi Oke, "Rural Electrification and Captive Power Generation" (2013) 3 *Nigerian Lawyers' Journal*, *Law Digest* (UK), summer 2013, at 51-52.

³⁷ For detailed analyses on land and electricity in Nigeria, see Yemi Oke, *Nigerian Electricity Law and Regulation*, (Lawlords, Abuja/Lagos, 2013) Chapter 5, at pages 83-95.

³⁸ See section 77(1) of the EPSR Act, *supra* note 16.

³⁹ *Ibid*, sub-section (3).

land, shall be bound by a declaration that a piece of land is required for public (electricity) purposes. The Act provides, in clear and definite terms, that when the President issues a notice requiring the land for public purpose pursuant to section 28(4) of the Land Use Act,⁴⁰ the Governor of a State shall revoke the existing right of occupancy in respect of the land and grant a certificate of occupancy in favour of the licensee.⁴¹

Revocation of land for ‘overriding public interest’ may not ordinarily justify revocation of existing rights of occupancy or allocation of same to a business enterprise simply because such entities trade in electricity or related activities. Companies holding either generation, transmission or distribution licenses are business enterprises trading with the ultimate objective of profit maximisation in electricity. Therefore, for the purpose of electricity undertakings, a declaration that the land is required for purposes of generation, transmission or distribution of electricity should be based on payment of compensation equal the current commercial or market value of the land in question as it exists in respect of compulsory purchase of land. Payment of commercially realistic amount in compensation would mitigate apparent social injustice of the declaration that a person’s right of occupancy would be revoked for going concerns and mercantilists’ entities engaging in electricity trading on ground of ‘public need’.

Revocation of right of occupancy to land for purposes of electricity undertakings is a negation of total deregulation and commercialisation of electricity in Nigeria.⁴² As argued elsewhere,⁴³ the principle of compulsory purchase, compared to revocation of right of occupancy, enables the acquiring authority assume the obligation of paying for the full value of the land to be purchased or taken.⁴⁴ The profit motive of the reformed electricity sector of Nigeria would appear to make ‘compulsory purchase’ a suitable mechanism compared to ‘compulsory acquisition’ of land for electricity purpose. Compulsory purchase of land is particularly suitable where private-commercial motives intermingle with public interest as it makes for the payment of actual market value for the land purchased or acquired. Compared to revocation of right of occupancy where land is required for the purpose of electricity undertakings either for generation, transmission or distribution; a fair and just end is attained that makes for a win-win situation unlike acrimonious relationship between land owners or resource-bearing communities and oil companies in Nigeria.⁴⁵

iv) Dispute Resolution Mechanisms

The Dispute Resolution Mechanisms⁴⁶ of the reformed power sector of Nigeria also appears potentially counter-productive⁴⁷ as they contradict the traditional principle of adjudication. For example, the provision for re-hearing⁴⁸ raises certain legal questions. Re-hearing a matter before the same panel that sat over the earlier proceedings, for whatever reason or motive, is immoral, unjust and illegal; it offends the principle of

⁴⁰ See *Land Use Act*, Cap L5, Laws of the Federation of Nigeria 2004.

⁴¹ See section 77(9) of the EPSR Act.

⁴² See Public Enterprises (Privatization and Commercialization) Act, *supra* note 15.

⁴³ See Yemi Oke, “Advocating Compulsory Purchase as an Alternative to Revocation of Title to Land for Electricity Purpose in Nigeria” (2013) *Journal of Private and Property Law*, University of Lagos, at pages 36-59.

⁴⁴ See section 63 of the *Lands Clauses (Consolidated) Act* 1845. The provisions of the Act formed the basis of the decision of the Privy Council in *Director of Buildings and Lands v Shun Flung Ironworks* [1995] 2 AC, 111; [1995] 1 All ER 846; [1995] 19 EG 147. See Barry Denyer-Green, *Compulsory Acquisition and Compensation* (8th ed.) (EG Books, London: 2005), at 168.

⁴⁵ Yemi Oke “Advocating Compulsory Purchase as an Alternative to Revocation of Title to Land for Electricity Purpose in Nigeria”, *supra* note 43.

⁴⁶ See Rule 11 of the *Business Rules of the Nigerian Electricity Regulatory Commission*, 2006.

⁴⁷ Rule 17 (1).

⁴⁸ Rule 22 (1).

natural justice. The later decision arising from such rehearing would ordinarily be tainted with elements of bias. Re-hearing sometimes comes up before the same panel on certain conditions. However, it is advocated that rehearing in this circumstance should come up before a new panel. It is a settled principle of justice that a court or panel or tribunal becomes *functus-officio* once it has rendered its decision on the issue.

v) **Host Community concerns**

To a large extent, host communities' concerns have been relegated or seemingly ignored in the privatisation of the power sector in Nigeria. Community concern in electricity is a new development in Nigeria. It has its roots in community-related agitations in the oil and gas sector due to the top-down (state-centric), centralised structure of energy and natural resource governance in Nigeria. Host community issue is a potent factor capable of undermining the activities of both local and foreign electricity companies operating in Nigeria, as elsewhere. Host community hostility is a new generation of foreign investment risk.⁴⁹ Matters affecting the host populations rarely receive much attention.⁵⁰ Most legislative and contractual documents based on the exploitation of energy resources, including electricity generation, transmission and distribution tend to be silent on devising institutional means to protect the host populations against sometime devastating environmental, health and social impacts of the activities of energy companies.⁵¹

Although, yet to be enforced, the Nigerian electricity regime seems to provide for institutional framework to protect the host community⁵² located around hydro-based power generation installations under the *Hydro-Electric Power Producing Areas Development Commission (HEPADC) Act*.⁵³ The *HEPADC Act* primarily aims to create a Commission charged with responsibility for managing the ecological menace of hydro-based electricity due to operation of dams, and for related matters affecting the hydro-electric power-producing States or areas in Nigeria. Aside from the legal framework providing for hydro-based electricity generation under the *HEPADC Act*, no similar framework exists for other forms of electricity generation in Nigeria.

vi) **Environmental concerns**

Environmental implications of potential increase in electricity generation, transmission and distribution appear insufficiently contextualised under reformed power sector.⁵⁴ The power sector arguably stands in closer proximity for environmental degradation like the oil and gas sectors. This is not only because the liberalisation policy of government tends to accommodate environmentally insensitive disposition by sector players; but also because principles like pollution haven, regulatory chill, the "race-to-the-bottom theory"⁵⁵ and other phenomena associated with competition⁵⁶ might become inevitable in the quest to attract foreign direct investment (FDI) in the power sector of Nigeria.⁵⁷

⁴⁹ George S. Akpan, "Host Community Hostility to Mining Projects: A New Generation of Risk?" in Bastiba, E.; Walde, T., and Warden-Fernandez, J., (Eds.) *International and Comparative Mineral Law and Policy: Trends and Prospects* (The Hague: Kluwer Law International, 2005) at 311.

⁵⁰ *Ibid.* at 312.

⁵¹ *Ibid.* Akpan argues that inability of members of the host communities to have recourse to effective remedies in both the host and the home State and in international law, against activities of players in the energy sector that have deleterious effects on them has potential of creating a new source of risk to foreign investment in the sector.

⁵² For detailed discussion on hydroelectric power producing states and communities, see Yemi Oke, *Nigerian Electricity Law and Regulation* (Lawlords Publishers, Abuja: 2013), Chapter 7 at pages 118 and 126-132.

⁵³ See *Hydro-Electric Power Producing Areas Development Commission*, Cap H5A, Laws of Federation of Nigeria (LFN), 2004.

⁵⁴ See Dayo Amokaye and Yemi Oke, "Electricity Regulation in Nigeria: Perspectives to Host Communities and Environmental Concerns" (up-coming) in (2015) *Boston Journal of Environmental Law and Policy*, at 10-26.

⁵⁵ See for example T. Johnston, "The Role of Intergenerational Equity in a Sustainable Future: The Continuing Problem of Third World Debt and Development" (1998) 6 *Buffalo Environmental Law Journal*, pp 36-80, at 58; and Madeline Cohen, "A Menu for the Hard-Rock Café: International Mining Ventures and Environmental

The current energy mix reveals that Nigeria generates electricity from thermal, natural gas, and hydro sources with natural gas sources being the highest source.⁵⁸ These sources naturally imply attendant environmental pollution by way of land degradation, water pollution and atmospheric pollution occurring at each stage of energy process.⁵⁹

Ecological footprints⁶⁰ of bad environmental management, particularly in electricity undertakings may hardly get totally erased by legislation or policy. More worrisome, the current regime of electricity appears insufficient to regulate attendant environmental implications. To effectively curtail pollution in the power sector would require creating appropriate institutions with powers to invoke civil and criminal sanctions to curtail attendant environmental recklessness in electricity generation, transmission and distribution.

Conclusion

The legal and regulatory gaps and overlaps in the new power sector regime in Nigeria are enormous. This study articulates a regime of sustainable electricity governance for Nigeria in the wake of the reformed power sector, which targets private-sector driven electricity generation, transmission and distribution. Without doubt, the country is on the right path towards economic development, particularly in the area of power and infrastructure. However, findings from researches have thrown-up crucial issues that must be addressed towards realising the objective of the reformed power sector in Nigeria. This is due to the realisation that economic development cannot be attained unless in a reasonably stable political and legal environment. Sustainability of the country's power sector is dependent on the degree of predictability of the legal and regulatory framework of the sector. As law has never proved to be the *magic wand* for automatic sustainability, the success of the reformed power sector would also entail getting the institutions right, through effective enforcement of law and regulation in the sector as well as elimination of corruption and other anti-social practices that often retard social and economic development.

Cooperation in Developing Countries" (1996) 15 *Stanford Environmental Law Journal*, 130 at 154. But see and compare David Wheeler, "Racing to the Bottom? Foreign Investment and Air Pollution in Developing Countries", (Paper Written for Development Research Group, World Bank, 2001) at 5.

⁵⁶ For detailed discussion and overview of literature on the issue of investment theories, see "Environmental Issues in Policy-based Competition for Investment: A Literature Review", ENV/EPOC/GSP (2001), 11; A Report of the Organisation for Economic Co-operation (OECD), 4 April 2001, online: OECD <www.oecd.org/findDocument/0,2350,en_2649_34313_1_1_119666_1_1_37465,00.html>, last visited on 20 July 2004.

⁵⁷ See "Environmental Benefits of Foreign Direct Investment: A Literature Review ENV/EPOC/GSP (2001), 10; A Report of the Organisation for Economic Co-operation (OECD), 5 April 2001, online: OECD <www.oecd.org/findDocument/0,2350,en_2649_34313_1_1_119666_1_1_37465,00.html>, last visited on 20 July 2004 for detailed discourse and review of literature on the environmental and other benefits of FDI which seems to justify foreign investment in natural resources including mining, at 10-24.

⁵⁸ See World Bank Development Indicator, on-line at <http://www.tradingeconomics.com/nigeria/electricity-production-from-hydroelectric-sources-percent-of-total-wb-data.html> accessed 30 June, 2013.

⁵⁹ Amokaye & Oke, *supra* note 54.

⁶⁰ Yemi Oke, "Intergenerational Sustainability and Traditional Knowledge in Africa: Natural Resource Management Perspective" in *Sustaining Life on Earth: Environmental and Human Health Through Global Governance* (C.L. Soskolne, et al., eds.) Lexington Books Maryland, USA. (2007) at 227-239. *Ecological Footprint* is the analysis of a philosophical assumption that advocates new system-based approach to environmental consciousness. It was developed by Dr. Williams Rees at the University of Columbia in the 1990s as analytical tool called "Ecological Footprint Analysis- EFA". See Brian D. Ladd and Colin L. Soskolne, "A Toolkit for Ecological Enquiry under Global Ecological Change-Conventional and Disaggregated Ecological Footprint Analysis" in Colin L. Soskolne (ed.) *Sustaining Life on Earth* (Lexington Books, New York, 2008) 369 at 372.