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# POWER SECTOR REFORM AND SERVICE DELIVERY BY ABUJA ELECTRICITY DISTRIBUTION COMPANY IN NIGERIA.

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## ABSTRACT

Despite the increase in the finance of Abuja Electricity Distribution Company on the construction and maintenance of power infrastructures, the output of electricity generated or power supply over the years was not enough to match the electricity output or power supply needed for a level that will bring about sustainability increase in service delivery by Abuja Electricity Distribution Company (AEDC), hence, the need for power sector reform. Consequently, there is need to assess power sector financing, power sector electricity charges and power sector labour force vis-à-vis the level of service delivery by Abuja Electricity Distribution Company (AEDC) in Nigeria. This research is therefore intended to provide a pivot for the development of the power sector through power sector reform and effective service delivery by the Abuja Electricity Distribution Company (AEDC). The researcher using content analysis found out that, increase in the power sector finance will help to increase power supply and consequently, the level of service delivery by Abuja Electricity Distribution Company in Nigeria. Increase in power sector electricity charges brought about decrease in power supply in Nigeria and consequently reducing the level of service delivery by Abuja Electricity Distribution Company in Nigeria .Increase in the power sector labour force led to a fall in power supply and consequently a reduction in service delivery by Abuja Electricity Distribution Company in Nigeria (AEDC). The researcher recommends among others, that Abuja Electricity Distribution Company should ensure that adequate provision must be made to streamline the financing of Abuja Electricity Distribution Company (AEDC) in such a way to increase power supply so as to improve the amount of service delivery by Abuja Electricity Distribution Company (AEDC) in Nigeria. The Abuja Electricity Distribution Company should ensure that power sector electricity charges must also be streamlined in such as way to increase power supply by allowing every electricity consumer in Lokoja metropolis to have access to prepaid meters to avoid the problem of controversial bills between the electricity consumers and the electricity service provider often caused by estimated billing.

**Keywords**: Power sector reform; Service delivery; Abuja Distribution Company (AEDC); Power

sector finance; Power sector labour force

## INTRODUCTION

Regular power supply is critical for economic development. For the economy of any nation to grow, the country must invest heavily in all the sectors of the national economy. The growth, prosperity and national security of any country are dependent upon the adequacy of its electricity supply industry (Asubiojo, 2007). Indeed the link between electricity supply and economic development is such that the health of the industry is a matter of deep and personal concern to all citizens. Nigeria is no exception (Ibitoye & Adenikinju, 2007).

The erratic and unpredictable nature of electricity supply has engendered a sense of frustration that is felt across the country as a whole and in its urban centres in particular. The power problem is one of the prime brakes on the economic growth of Nigeria. The economy needs at least 10,000MW of electricity (Makwe, 2011).

Nigeria has over the years witnessed decline in the power sector which has led to a near complete failure of the system at the onset of the civilian regime in 1999 (Bolanle, 2011). Every person living in Nigeria has one or two stories to tell about the unreliability of the Nigerian power sector, is it the housewife who looks on dejectedly as she sees the food she has painstakingly prepared turn bad due to inadequate power supply, or the students' frustration and disappointment as they read overnight with candles in preparation for an examination, or the upheaval in the hospital as a result of the power failure during a surgical operation, or the incessant hum of generators that accompanies you everywhere you go to mention just a few.

Nigeria, a country with a population of 140 million people according to 2006 national population census and richly endowed with various sources of energy, crude oil, natural gas, coal, hydropower, solar and wind etc is still mired in the dark. Poor electricity supply has been a serious problem in Nigeria and despite the huge amount of money said to have been expended by successive administrations to revamp the power sector, there is no evident or obvious change as not much seems to have been achieved as the country still witnesses frequent and persistent power outages (Ubi, Effiom, et al, 2012). While businesses crumble daily owing to this long running problem of power supply with manufacturing companies spending so much to generate their own power supply with the costs eating into profits, generator dealers are the beneficiaries of the rots and decays in the power sector as virtually every business in the country patronizes them. The availability of reliable electric power to the homes and businesses of Nigeria citizens has been one item in our national life that we have approached with so much hope and yet experienced so much frustration over the past decades. Various regimes, in the distant past, paid little attention to the sector but in the recent decades, subsequent regimes have put in billions of naira to reverse the neglect and mismanagement which has characterized the sector. Nigeria's electric power sector had been dominated by a State-controlled monopoly generally regarded as not meeting expectations (Brian and Stott, 2014).

Power generation, transmission and distribution infrastructure, significantly is still inadequate, worsening the problem of the real sector of the economy. There have been historical challenges to the growth of the sector including prolonged federal government presence at commanding heights, consistent under-investment since the early 1980 and poor management of the country's gas resources. Nigeria's power sector requires extensive reform if the country's economic development and poverty mitigation program is to be realized. This perception is behind the reform programme in recent times initiated by the Nigerian government by means of the goal of privatizing the national electric power monopoly, Power Holding Company of Nigeria (PHCN). At present, the country faces serious energy crisis due to declining electricity creation from domestic power plants which are basically obsolete, unreliable and in an appalling state of disrepair, reflecting the poor maintenance culture in the country and gross inefficiency of the public utility provider (Brian and Scott, 2014).

With the return to democratic rule after sixteen years of military dictatorship, popular expectation was that Nigeria will negotiate a gradual exit from most of its socio-economic, political and governance crises. The present crisis in Nigeria's power sector continues to generate interest. Previous projections of generation capacity expansion have not been achieved; neither is there significant capacity additions coming in from hitherto licensed private IPP sources, leaving huge current demand largely unmet (Asubiojo, 2007).

In March 2005, President Olusegun Obasanjo signed the Power Sector Reform Bill into law, enabling private companies to participate in electricity generation, transmission, and distribution. The government has broken PHCN into eleven distribution firms, six generating companies, and a transmission company, all of which will be privatized. Several problems, including union opposition delayed the privatization, which was later rescheduled for 2006 (Asubiojo, 2007).

In February 2005, the World Bank agreed to provide PHCN with $100 million to assist in its privatization efforts. According to the Sustainable Energy Regulation and Policy Making for Africa (2008), in Africa, it is generally agreed that the need for embarking on power sector reforms arose from poor technical and financial performance of state-owned electricity utilities and the inability of utilities and government to mobilize sufficient investment capital for the electricity sub-sector's development and expansion.

The need for embarking on comprehensive power sector reform arose from two primary concerns: firstly, the dissatisfaction over the poor technical, financial, and managerial performance of the state-owned electricity utilities, secondly, the inability of utilities and the government to mobilize sufficient investment capital for the electricity sub-sector's development and expansion.

Other reasons for power sector reforms include the following: Introducing competition: increasing the number of players in the market to ensure increased quality of service

as well as lower tariffs. Tariff reform: adjusting tariffs in order to remove subsidies thus ensuring that they become cost-reflective. Minimizing government's regulatory role: shifting the regulatory mandate from the Ministry/Department of Energy to an "independent" regulatory agency to ensure a level playing field. Amending electricity acts: reviewing electricity acts to establish a sound legal basis for power sector reforms. The goal of the Federal Government's power sector reform is to improve efficiency, encourage private sector participation and strengthen the power sector as Nigeria's engine for development (Bureau of Public Enterprise, 2010).

In order to attract private sector investment and sustain the development of the power sector to ensure uninterrupted and efficient power supply in the country, the National Council on Privatization (NCP) defined the objectives for power sector reform as follows: to promote competition and facilitate more rapid provision of service throughout the country; to create a new legal and regulatory environment for the sector that establishes a level playing field, encourages private investment and expertise, and meets social goals; to restructure and privatize the National Electric Power Authority (NEPA); and, to encourage the successors to NEPA to undertake an ambitious investment program (Bureau of Public Enterprise, 2010).

The power sector in Nigeria at this time has been dominated by the Power Holding Company of Nigeria (PHCN), formerly known as the National Electric Power Authority (NEPA). The government has tried to increase private participation in the power sector by commissioning independent power projects (IPPs) to generate electricity and sell it to PHCN. Government through the NIPP and PHCN also made attempts to develop the infrastructure in generation, transmission and distribution on fast track basis. The aim was to improve power supply to consumers. In order to achieve that, the Federal government in collaboration with state government embarked on the implementation of new generation, new gas pipelines, a new transmission and new distribution networks in 2005, using the excess crude account (Presidential Task Force on Power, 2011).

To support this initiative of the Federal Government of Nigeria, the Nigerian Electricity Regulatory Commission (NERC) issued 14 new licenses in 2007 to private operators for the establishment of independent power plants with varied capacities and expected total output of 6,010MW. All the licensed power generating plants were gas-based. This brought the total number of licenses issued by the Commission to 23, with expected total output of 9,152.0MW. Two new distribution agencies were also granted licenses to commence operation (CBN Annual Report and Statement of Account: 2007). The study examines power sector reforms and service delivery by Abuja Electricity Distribution Company in Kogi state, Nigeria from 2005-2015.

## POWER GENERATION IN NIGERIA

Electricity generation in Nigeria began in 1896. The Nigerian Electricity Supply Company (NESCO) began operation as an electric utility company in 1929 with the

construction of a hydroelectric power station at Kurra near Jos in Plateau State. In 1951, the Electricity Corporation of Nigeria (ECN) was established constructing the first 132kv line linking Ijora power station to Ibadan power station.

The evolution in the sector continued till 1962 with the emergence of the Niger Dams Authority (NDA) with a mandate to develop, explore and expand the country's enormous hydro power potentials. Several events that led to merging of the Electricity Corporation of Nigeria (ECN) with the Nigeria Dams Authority (NDA) in 1972 to form the National Electricity Power Authority (NEPA) with the exclusive monopoly over electricity generation, transmission, distribution and sales. However in 1998, NEPA ceased to have this monopoly and was unbundled. Nigeria with nine (9) generating stations three (3) hydro and six (6) thermal with a total installed capacity of 5906mw.

They are:

i. Kainji Hydro power station located in Niger State which is the first hydro power station in the country with eight (8) generating units.
ii. Jebba Hydro power station located in Kwara State down the stream of the Kainji hydro power station with six (6) units.
iii. Shiroro Hydro power station located in Niger State on the Shiroro Gorge along river Kaduna with four (4) generating units.
iv. Afam Thermal power station. This station uses gas and is located in the outskirts of Port Harcourt in River State with eighteen (18) units.
v. Delta Thermal power station in Ughelli with twenty (20) units.
vi. Egbin Thermal power station; the largest thermal power station (58) units.
vii. Sapele Thermal power station which is located in Ogorode, Delta State. It uses both steam and gas turbines (18) units.
viii. Ijora Thermal power station, on the other hand, is located in Lagos. It uses AGO fuel and has three (3) units.
xiv. Oji Thermal power station located in Oji River in Oji, Enugu State. This is the only coal powered station in country with four (4) units.

**Table 1: The Successor Generating Companies (GENCOs)**

| S/NO | GENCOs | TYPE | INSTALLED CAPACITY (MW) |
|---|---|---|---|
| **1** | Afam Power Plc | Gas Fired | 987.2 |
| **2** | Sapele Power Plc | " | 1020 |
| **3** | Ughelli Power Plc | " | 942 |
| **4** | Kainji Hydro Electricity Plc | Hydro Thermal | 987.2 |
| **5** | Afam | Thermal Hydro | 540 |
| **6** | Shiroro Hydro Electric Plc | Hydro | 600 |
| | **Total** | - | **5082** |

***Source:*** Nigerian Electricity Regulatory Commission (2015).

Table 1 shows the generating companies in Nigeria before 2005. At that time, Nigeria

depends solely on two sources for power generation; Gas and Water. These initial Gencos alone with an installed capacity of 5082 will service effectively if utilized to full potentials of installed capacity. These sources are not utilized as at 2006 to full capacity. In some cases, not even exploited at all.

**Table 2: Six Independent Power Plants (IPPs)**

| S/NO | NAME OF POWER PLANT | YEAR | LOCATION | INSTALLED CAPACITY (MW) | AVAILABLE CAPACITY (MW) |
|---|---|---|---|---|---|
| **1** | AES Power Station | 2000 | Egbin, Lagos | 224 | 224 |
| **2** | Shell-Afam | 2008 | Afam, River State | 650 | 650 |
| **3** | Agip-Okpai Power Station | 2005 | Okpai, Delta State | 480 | 480 |
| **4** | ASG-Ibom Power Station | 2007 | Akwa Ibom State | 155 | 76 |
| **5** | RSG-Trans Amadi Power Station | 2009 | Port Harcourt River State | 36 | 24 |
| **6** | RSG-Omoku Power Station | 2005 | Omoku, River State | 150 | 30 |
| | **Total** | **-** | **-** | **1695** | **1484** |

***Source:*** Nigerian Electricity Regulatory Commission (2015).

Table 2 Shows independent power plants established by Obasanjo administration to help improve the power generation capacity of Nigeria. The six IPPs have total installation capacity of 1695 megawatts. The available capacity for usage was 1484 megawatts. Contributions to the national grid by these Independent Power Plants will add to the contributions of the existing GenCos.

**Table 3: Ten (10) Nigeria Independent Power Plants (NIPPs)**

| S/NO | NAME OF POWER PLANT | LOCATION | INSTALLED CAPACITY (MW) |
|---|---|---|---|
| **1** | Calabar Power Project | Calabar, Cross River State | 634 |
| **2** | Egbema Power Project | Egbema, Imo State | 381 |
| **3** | Ihorbor Power Project | Ihorbor, Edo State | 451 |
| **4** | Gbarah Power Project | Gbarah, Bayelsa State | 254 |
| **5** | Sapele Power Project | Sapele, Delta State | 451 |
| **6** | Omoku Power Project | Omoku, River State | 265 |
| **7** | Alaoji Power Project | Alaoji, Abia State | 1,131 |
| **8** | Olorunshogo Power Project | Olorunshogo, Ogun State | 754 |
| **9** | Omotosho-Phase 2 | Omotosho, Ondo State | 513 |
| **10** | Geregu-Phase 2 | Geregu, Kogi State | 506 |
| | **Total** | **-** | **5,340** |

***Source:*** Nigerian Electricity Regulatory Commission (2015).

Table 3 shows the Nigerian independent power plants established to transform the power generation and distribution capacity of Nigeria power sector. These NIPPs has an installed capacity of 5340 megawatts.

## EFFECT OF POWER SECTOR ON SERVICE DELIVERY

In spite of Nigeria's huge resource endowment in energy and the enormous investment in the provision of energy infrastructure, the performance of the power sector has remained poor, in comparison with other developing economies. This assertion was confirmed by a World Bank (1993) assessment study conducted on energy development in Nigeria, which compared the performance of Nigeria's Power Sector with those of 20 other developing countries. The study reveals that the sector had the highest percentage of system losses at 33-41 percent; the lowest generating capacity factor at 20 percent; the lowest average revenue at US$1.56 KWH; the lowest rate of return at 8 percent; and the longest average accounts receivable period of 15 months. Perhaps, the worrisome picture depicted by this assessment and other negative considerations informed government's decision to embark on full privatization of the power sector and the proposal for increased foreign participation in it.

Adoghe (2010) suggests that a reform was due in the power sector and that the country was on the right course as the Nigerian Electricity Regulatory Commission was doing a satisfactory job and he was positive of the outcome. Okoro and Chikuni (2007) explained that the major reason why the services of NEPA have remained poor is essentially because of monopoly. The company has been the sole provider and

distributor of electricity to the entire nation and it is envisaged that the reform program will usher in a competitive energy market, break the monopoly enjoyed by NEPA and increase the rate of technology development as well as provide jobs for both technical and non-technical graduates.

Nnaji (2008) traced the repeated failure to resolve the seemingly intractable issue of power supply and distribution to lack of a clearly defined roadmap by previous administrations and therefore the government's recent decision to privatize the power sector should be applauded and looking at the liberalization of the telecommunications sector and the healthy competition that the private investors and carriers have brought into the sector should inspire a similar policy for PHCN. Adogu (2011) stated that reforms in the power sector will certainly galvanize and ensure optimal value of privatization to the Nigerian economy.

Jonathan (2011) while unveiling the Power Reform Roadmap observed that the growth, prosperity, and national security of any country are critically dependent upon the adequacy of its electricity supply industry, that the link between electricity supply and economic development is such that the health of the industry is a matter of deep and personal concern to all citizens thereby making the full implementation of the electric power sector reform a key priority.

Agagu (2008) notes that it is indisputable fact that Nigerian has one of the most problematic electricity sectors in the world, with an estimated installed electricity generation capacity of 8,644 MW, and available capacity of only approximately 3,718 MW, to cater for the needs of a population of over160 million. By comparison, South Africa, with a population of just 50 million, has an installed electricity generation capacity of over 52,000 MW. On a per capita consumption basis, Nigeria is ranked a distant 178th with 106.21 KW per head, –well behind Gabon (900.00); Ghana (283.65); Cameroon (176.01); and Kenya (124.68).The historic gap between the demand for electricity and the available capacity has led to the current widespread power shortage and inefficiency and, consequently, self-generation of power by both industrial and residential consumers. The Manufacturers Association of Nigeria (MAN), and the National Association of Small-Scale Industries (NASSI), has estimated that their members spend an average of about N2billion (about $12 million) per week on self-power generation. To this end, the Nigerian power sector presents immense opportunities for private investment in the electricity power sector.

According to Omoyefa (2010) it is self-evident that the poor performance of the electricity power sector in Nigeria has been a significant barrier to private investment in the country, the overall development and economic growth. The sector's market structure like most economies of the developing world is dominated by the state-owned power entity – Power Holding Company of Nigeria (PHCN), formerly the National Electric Power Authority (NEPA) – in a monopolistic, vertically integrated business model. The dissatisfaction with the performance of PHCN – symptomized by its low capacity generation; high costs; inadequate distribution of electric power;

inability to finance new or expanded infrastructure; and inadequate machinery for effective billing and collection of bills fuelled the debate on the theoretical and empirical justification for its involvement in Nigeria's electricity power sector, and became the driving force behind liberalization.

Privatization of the unbundled electricity generations and distributions under dispersed ownership, to encourage private investors and operators to bring in financial resources and technical and managerial expertise to correct PHCN's deficiencies. Development of economic regulation that is independent from government and industry capture.

Power shortages, poor operational performance, a lack of foreign investment, the absence of a sustained and deliberately deployed long-term power development strategy, under-exploitation of the nation's abundant energy endowments and the inadequate implementation of reforms, were readily conceded by Government in the Presidential Road Map of 2010.

These IPPs generates and sell electricity privately to utilities or the general public (Lawal, 2008).The Federal Government of Nigeria began a holistic process of reform with the enactment of the Electric Power Sector Reform Act (EPSRA) 2005. The Act outlined the framework for a sustainable reform to: Unbundle the state-owned power entity into generation, transmission and distribution companies. Provide for the transfer of assets, liabilities and staff of NEPA to PHCN, migrate PHCN staff to successor generation, transmission and distribution companies. Create a competitive market for electricity services in Nigeria. Set up an independent regulator.

The reform process kicked off in 2005 with the unbundling of the state-owned NEPA into 11(eleven) distribution companies, 6 (six) generation companies, a single transmission company, and the incorporation of an initial holding company (Power Holding Company of Nigeria Plc (PHCN) (Bolanle, 2011).

The Reform proposes that a single subsidiary will control the transmission sector leaving the six generating companies and expected independent power producers to sell electricity to the eleven distribution companies. The distribution companies will in turn, control the supply of electricity within a designated geographical area. These objectives and the initial objectives of the Electric Power Sector Reform Act (EPSRA) 2005 were frustrated, inter alia, by eight obstacles:

1. The maintenance of an inappropriate pricing regime;
2. The failure to establish a bulk purchaser in line with the provisions of the EPSR Act;
3. The failure to address investors' concerns about the creditworthiness of the distribution companies/bulk purchaser during their eventual transition to financial viability;
4. The operational and financial risks to potential acquirers of successor

companies posed by the failure to reach an agreement with the labour unions on the settlement of outstanding arrears (of salaries, pensions and other benefits) and on severance pay;

5. The uncertainties generated by the delay in operationalizing the Nigerian Electricity Liability Management Company (NELMCO);
6. The delay in contracting out the management of the Transmission Company of Nigeria (TCN);
7. Concerns about the licensing regime for power generation and power distribution companies; and
8. The lack of continuity and consistency in pursuing the enactment and commencement of the Electric Power Sector Reform Act and subsequently, after the Act was eventually passed, in following the timelines established therein.

Following the two-year break in the reform agenda between 2007 and 2009, President Jonathan restarted the reform process and launched the Power Sector Roadmap in August 2010.The Roadmap is as follows: Privatization commences: December 2010; Submission of bids: July 2012; National Council on Privatization (NCP) approval of bids: October 2012; Completion of negotiations: January 2013; Completion of Industry Agreements: February 2013; Payment of 25% Share Sale Purchase: March 2013; and Payment of 75% Share Sale Purchase: August 2013.

Having completed the first phase of the power sector privatization process, the Federal Government on November 1, 2013, handed over to private investors the distribution companies (Discos) and five generation companies (Gencos) formerly owned by the defunct Power Holding Company of Nigeria. Five generation companies (Gencos) and 10 distribution companies (Discos) won the bidding. The Bureau of Public Enterprises (BPE) put the total sale figures of both the Gencos and Discos at $2.525 billion (about N404 billion). The Gencos went for $1.269 billion while the Discos were sold for $1.256bn. The breakdown of the preferred bidders for the Electricity Distribution Companies (DISCOs) as approved by the National Council of Privatization (NCP), are as follows: Kann Consortium won Abuja Distribution Company at $164 million; Vigeo Power Consortium for Benin at $129 million; West Power and Gas for Eko at $135 million; Interstate Electrics Limited for Enugu at $126 million; Integrated Energy for Ibadan at $169 million; NEDC/ KEPCO for Ikeja at $131 million; Aura Energy Limited for Jos at $82 million; Sahelian Power SPV Limited for Kano at $137 million; 4Power Consortium for Port Harcourt at $124 million and Integrated Energy Distribution and Marketing for Yola at $59 million. For the Electricity Generation Companies (GENCOs), the preferred bidders included Amperion for Geregu Plant at $132 million; Mainstream for Kainji Plant at $50.76 million with commencement fee of $237,870,000; North-South for Shiroro Plant at $23.60 million with commencement fee of $111 million; Transcorp/Woodwork for Ughelli Plant at $300 million and CMEC/Eurafric for Sapele Plant at $201 million. Owners of the generation companies and their partners are as follows: Amperion Ltd, owner of Geregu I Genco has Chief Femi Otedola as the

chairman. He is also the Chairman of Forte Oil, a major player in the nation's oil and gas sector. Otedola is financing 57% of Amperion's total equity. Its technical partners are BSG Resources Ltd with 38% and Shanghai Municipal Electric Power Company, 5%. Amperion purchased the PHCN firm for $132 million. Transcorp/Woodrock Consortium, which acquired the 972mw capacity Ughelli Power firm at $300 million, has Mr. Tony Elumelu as its chairman. He committed $225m fund through debt financing by African Finance Corporation (AFC), UBA and First City Monument Bank. Mainstream Energy Solutions, which got Kainji and Jebba Generation Company (Genco) for N27.2bn ($170 million) has retired Colonel Sani Bello at the helm of its affair. The deal was financed by Guaranty Trust Bank and the African Finance Corporation, AFC. Mainstream will be partnering with a Russian company, RusHydro to acquire the plant. North South Power acquired the Shiroro generation plant at $111.7 million. North-South has Niger state government as one of its owners. Other partners are XS Energy Ltd, BP Investment Ltd, Urban Shelter Ltd, Road Nigeria Plc, China International Water Electric and China Three Gorgers Corporation. Sahara Energy Resource Nigeria acquired the Egbin Power Station. It is in partnership with NEDC/Korea Electric Power Company (KEPCO), an international investor for $407 million. Sahara Energy Resource Nigeria is owned by Tope Sonubi and Tonye Cole For the distribution companies, KANN Consortium acquired the Abuja Distribution Company (Disco), Vigeo got the Benin Disco, West Power and Gas acquired Eko Disco, NEDC/KEPCO bought Ikeja, while Sahelian Power SPV got the Kano Disco.

Also, Integrated Energy Distribution and Marketing Company acquired both Ibadan and Yola discos, Interstate Electrics got Enugu, and Aura Energy got the Jos disco while the 4Power Consortium comprising Bayelsa, Rivers, Cross River and Akwa Ibom state governments acquired the Port Harcourt disco. KANN Utility Consortium Ltd won the bidding for the Abuja Distribution Company. The company, a joint venture of Copperbelt Energy Corporation (CEC) Plc and Xerxes Global Investments, acquired 60% of the Abuja Electricity Distribution Company (AEDC) at $164 million. It has CEC Zambia as its technical partner. Vigeo Power Ltd acquired the Benin Disco after paying 75% balance of $96.75.It is owned by Victor Gbolade Osibodu. West Power and Gas won the bidding for the Eko Disco. They are partnering with Siemens Ltd of Germany, the executor of the 434mw Geregu II; National Integrated Power Projects (NIPP) under the Niger Delta Power Holding Company (NDPHC); Alpha Consortium Ltd, Atlantic Meridian and Africa Infrastructure Investment Fund 2, Mauritius to form the West Power and Gas Consortium. West Power acquired the Eko Disco after full payment of $135 million. It has Mr Charles Momoh as the Chairman. KEPCO/NEDC Consortium also acquired the Ikeja Distribution Company at $134.75 million. The acquisition of Ikeja Distribution Company makes it the only investor to have a stake in both the generation and distribution sections of the Nigeria's power sector. It is a partner with Sahara Energy Resource Nigeria in the Egbin Power Station project .Integrated Energy Distribution and Marketing Company (IEDMC), acquired both the Ibadan and Yola Distribution Company for $160 million. It is in technical partnership with the Manila Electric Company (Meralco), the Philippines largest distributor of electric power. The

Chairman is Gen. Abdulsalam Abubakar .Sahelian Power SPV acquired the Kano Disco for $102 million. It has Alhaji Yusuf Hamisu Abubakar as the Managing Director. Interstate Electrics acquired the Enugu Distribution Company for $106.4 million. It has partners Power House International and Metropolitan Electricity Authority of Thailand as partners. The Chairman is Sir Emeka Offor .Aura Energy acquired the Jos Distribution Company. Aura acquired the distribution Company after paying $82 million. The Chairman is Alhaji Mohammed Noma. 4Power Consortium which was formed by the governments of Bayelsa, Rivers, Cross River and Akwa Ibom states acquired the Port Harcourt Disco (Sunday Trust, 6th, October, 2013).

A review of employee status in privatized and deregulated public enterprises in Nigeria reveals that agencies charged with the responsibility of giving effect to these schemes have paid lip service only to the questions of job security adequate pensions, and unemployment benefits. Problems associated with adequate remuneration for workers in both the public and private sectors equally needs to be addressed. Employee status in privatized public corporations and parastatals refer to the fundamental question of whether or not such employee have a legal right to be protected from unjustified with more NIPPs more power will be generated.

## ELECTRIC POWER SECTOR REFORM ACT OF 2005 (EPSPRA, 2005)

This Act was established by the signing in 2001 of National Electricity Power Policy (NEPP). This policy calls for fundamental changes to ownership control and regulation of the power sector. It also translated NEPA into the newly incorporated Power Holding Company of Nigeria (PHCN) Plc. Comprising of eighteen (18) separate successor companies that took over the assets, liability and employees of NEPA. It is also responsible for the generation of six (6) transmission companies and the eleven (11) distribution companies, (EPSRA, 2015).

The problems or challenges with the birth of the reform are:

a. Limited access to infrastructure
b. Inadequate power generating capacity
c. Insufficient usage capacity
d. Lack of capital for investment
e. Ineffective regulation.
f. High technical losses and vandalism
g. Insufficient transmission and distribution facility
h. Inappropriate industries and market structure.
i. Unclear description of roles and responsibilities.

With the problems identified thus, it seeks solution through these 5 main objectives:

1. Unbundled NEPA through 18 separate companies
2. Privatization of the unbundled entities
3. Establishment of regulatory agency Nigerian Electricity Regulatory Commission (NERC).
4. Establishment of a rural electrification agency and funding it.
5. Establishment of Electric Power Consumer Assistance Fund (EPSR Act, 2005).

Another reform step by government was the creation of Energy Commission of Nigeria (ECN) in 1988 whose function include, but not limited to;

1. Serve as a centre for gathering and dissemination of information relating to national policy in the field of energy.
2. Ensure uninterrupted electricity.
3. Inquire into and advise the government of the federation or the state on adequate funding of the energy sector including research and development, production and distribution.
4. Establishment of dispute resolution mechanism to protect customers.
5. Monitor the performance of the energy sector in the execution of government policies on energy.
6. Ensure private participation in the electricity market.
7. Serve as a centre for providing solution to inter-related technical problems that may arise in the implementation of any policy relating to the field of energy (EPSRA, 2005).
8. Ensure consumer protection by ensuring fair pricing.

## The Rationale for the Nigerian Power Sector Reforms

Recent power sector reforms in Nigeria as observed by Aliyu, Sani, et al (2013) are simply in line with global trends. Government dominance is giving way to private sector led energy and electricity supply mechanisms. A combination of factors including fiscal pressures, environmental considerations, efficiency and the need for private sector involvement led to the paradigm shift. Historically speaking, power sector reforms in Nigeria began with the adoption of Structural Adjustment Programme (SAP) in 1986. However, it was the electricity sector Reform Act in 2005 that brought about progress. There was a u-turn or paradigm shift in the sector for the better.

The rationale for power sector reform is the legendary and systemic poor supply of electricity in Nigeria due to high level of power and revenue losses (technical and non-technical). The reform expectedly is to lead to costs reduction, including short term power and operation costs through efficiency gains, arising from economies of scale

as larger plants are run by larger markets (World Bank, 2008 and Eberhard 2003). This reform will lead to improved supply conditions, including better reliability and security of supply due to access to imports during emergency situations (Eberhard, 2003).

Power sector reforms can also foster development of country-level electricity markets by allowing sufficient scale to support increased competitive participation (UN-DESA, 2005). Reforms are expected to lead to reduced environmental impact from air and water pollution, and displacing biomass which is often associated with deforestation (Eberhard, 2003).

Reforms in the power sector have the ability to massively expand personal share ownership in Nigeria. It is believed that over 800,000 shareholders can be created after privatization of PHCN. Capital formation and growth are enhanced. Reforms also create an enabling environment, investment and a healthy co-operative industrial outfit. Efficiency and reliability of services will be enhanced with proper implementation of the reform programme. Reforms will lead to improved electricity services due to private sector participation and massive investment.

Reduced tariffs will be realizable only by a reformed process that makes the sector become more cost effective when it is opened up to competition and accountable to market criteria (PHCN, 2010). A competitive electricity market is capable of bringing about reduction in the tariff paid by consumers. The power sector reform will in the long run create reasonable employment opportunities for Nigerians. This is because the companies that are expected to participate will engage both skilled and unskilled labour in the process of executing their businesses.

Bolanle (2011) opined that the federal government reform of power sector is gingered mainly by the need to reduce the cost of doing business in Nigeria in order to attract new investment through the provision of quality and dependable power supply to the economy for industrial, commercial, and social-domestic activities. Other rationales for venturing into power sector reforms posited by Bolanle, (2011) include: The desire and need to be up to global standards; the need for improvement in the efficiency of the distribution generation and transmission network which is in a comatose state.

Ojobo (2005) argued that governments all over the world are not suited to run certain enterprises efficiently. As stated in the Business Concord editorial of June 7, 1985 “the history of public utilities in Nigeria has been such that continued maintenance of these corporations will only amount to general economic myopia. He also argues that privatization is taking place in many countries of the world, including the United State, Britain and Germany.

Given the poor state of power infrastructure, the resultant epileptic supply of electricity and lessons from previous programs of successive administration to resolve the challenge of poor power generation and distribution, it has become imperative that sustainable development in the power sector can only be brought about by a holistic approach. Emphasis should be placed on broad issues ranging from economic

growth, human development, and provision of safety nets and targeted reforms that will bring about a paradigm shift in the power sector.

The Nigerian economy is defective, amidst other socio-economic problems, aside poor power supply which are import dependence, dependence on a single economic sector (oil), weak industrial base, low level of agricultural production, weak private sector, foreign debt overhang, rural-urban migration and inefficient public utilities. An attempt at reforming the power sector will alleviate and solve these problems. All the identified issues have one link or the other to power generation.

To avoid the mistakes of the past and learn from them, there is the need for specific and broad base strategies targeted at the power sector. Government has long realized the danger of mono-cultural economy and the need to put in place measures to diversify the productive sector of the economy from oil to industrialization. This can only become a reality if our power sector is reformed and reposition to deliver on this mandate.

Despite the massive public expenditure on the construction and maintenance of power infrastructures, output of electricity generated over the years is not enough to match the electricity output needed for a level that will bring about sustainability, hence, the need for the reform. The presence of bottle necks and hindrance to private sector participation in the power sector leads to reform programs to give way to liberalization of the power sector. The power sector requires enormous funding which Government alone cannot handle, hence, the need for the reforms.

## ISSUES AND CHALLENGES OF POWER SECTOR PRIVATTIZATION

The word privatization can be defined in many ways. It can mean returning public-owned assets to the private sector, usually where control of an activity is passed from the public sector to the private sector by means of an issue of shares (Anyebe, 2011). The United Nations Development Programme (UNDP) guidelines on privatization, (1991) define it as:

> *The liberalization of the public sector activity, that is the subjection of micro-economic decision making to market forces, since this is a feature of profit oriented private sector activity. Section 14, Decree No 25 of 1988 defines privatization as the transfer of government owned shareholding in designated enterprises to private shareholders, comprising individuals and corporate bodies.*

Ezeani, (2004:24) on his own part defines it as a deliberate government policy of stimulating economic growth and efficiency by reducing state interference and broadening the scope of private sector activity through one or all of state owned assets to private ownership through sale of shares, private control or management of state owned assets, encouraging private sector involvement in formal public activity and

shifting decision making process to agents operating in accordance with market indicators.

The economic rationale behind privatization includes among others limited access to power, inadequate generation and usage of power capacity, overlapping or conflicting roles and responsibilities between government and holding companies, gaps in technical knowhow of employees, corruption and general state of inefficiencies among others (Iseolorunkanmi, 2014). One of the prominent infrastructures deficit gaps in Nigeria is in the area of power. Nigeria electricity power supply has been described as a generator economy (Ekpo, 2009). Series of power sectors pools conducted by No.1 polls Itds for the second quarter of 2013 revealed that about 130 million Nigerians representing 81% generate their own electricity through alternative source to make up for irregular power supply. The study showed a combined average of 69 percent of Nigerians experience the greater spending on alternative electricity supply (Vanguard, January 28, 2014).

The electric power industry across the world is being deregulated at the wholesale price level. The policy changes in whatever form it takes will have far reaching impacts on electricity production and consumption by private and public utilities, consumers and the environment will also be affected by deregulation (Roger, and David, 2002). In response to this alarming situation of power generation between 1999 and 2000, the Federal Government of Nigeria undertook aggressive reforms between 1999 and 2005 which is referred to as infrastructure rehabilitation phase of the reform (Lawal, 2008).

A major part of this phase is the National Integrated Power Project (NIPP) which was initiated in 2004 to boast electricity generation capacity by the opening of gas power stations across the country (Okolobah and Ismail, 2013).

Decentralization and the granting of licenses to different Independent Power Producers (IPPs) who generate and sell electricity privately to utilities or the general public (Lawal, 2008). The Federal Government of Nigeria however, began a holistic process of power reform with the enactment of the Electricity Power Sector Reform Act (EPSRA) 2005. This is actually the beginning of the privatization aspect of the reform:

1. The state owned power outfits were unbundled into generation transmission and distribution companies.
2. Provision was made for the transfer of assets, liabilities and staff of NEPA to PHCN.
3. PHCN staff was migrated to successor generation, transmission and distribution companies.
4. Creation of competitive market for electricity services in Nigeria.

The lack of continuity and consistency in pursuing the enactment of the provision of

the EPSRS, 2005 necessitated the launch of the power sector Roadmap in August 2010. The Roadmap has a clear agenda and timing:

- Privatization begins: December 2010.
- Submission of bids: July 2012
- National Council on Privatization (NCP) approval of bids: October 2012
- Completion of Negotiations: January 2013.
- Completion of Industry Agreements: February 2013
- Payment of 25% share sale purchase: March 2013 Payment of 75% share sale purchase: August 2013

Having completed this first phase of the power sector privatization process, the Federal Government on November 1, 2013 handed over to Private Investors the eleven Distribution Companies (Discos) and five Generation Companies (GenCos) as shown by the biding process as approved by the National Council of Privatization.

Despite the privatization of PHCN in 2013, electricity generation capacity in Nigeria has declined from the peak generation of about 4517.6 mega-watts (mw) as at December, 2012 to about 3670mw in January 2014 and to less 1600MW as at May, 2015 (nigeriapowerreform.org). The transmission company of Nigeria is facing initial take off challenge of lack of funds as it requires about 14.4 billion dollars to increase power efficiency by reducing transmission technical losses (Vanguard, March 1st 2014). Inadequate Gas supply to gas powered plants is another challenge. There are inadequate infrastructure needed for the gas flare processing and transportation. The negative efforts and activities of saboteur and vandals affect the availability of gas supply to the plants.

There is absence of comprehensive information detailing assets and liabilities of the erstwhile PHCN. There is conflicting interest between new investors and the government. Attitude of the workers of PHCN like every employee of privatized companies elsewhere are averse to privatization. The fear of the future of their employment created the initial resistance to the unbundling process. They sometimes put up acts of sabotage especially when there are unresolved issues bothering on arrears in salaries, pensions, severance and other benefits. Consumer fraud is also serious challenges to the privatization process inform of collaboration between consumers and utility staff resorting to unlawful direct hooking from line, by passing energy meter, injecting foreign elements into the energy meter and other forms of undue manipulation that will short change the Discos.

Power sector reforms in a developing economy such as Nigeria pose great challenges

not only to the government that initiated the programme but also to the populace who are the consumers of energy and to the new born Distribution Companies (Discos) who parade themselves as better alternative to the moribund NEPA and PHCN. When these IPPs and NIPs under construction in various states are given the necessary attention in form of funding by government, power generation would have increased across the country.

## HUMAN CAPITAL AND SERVICE DELIVERY IN ORGANIZATIONS

Effective and efficient public service delivery remains paramount to any government. Various institutions all over the world has envisaged that public service delivery on the context of efficiency, effectiveness, completeness, inclusiveness and accountability will pave way to good governance which eventually culminates to participatory, consensus oriented, transparency, responsiveness, equitable and inclusiveness towards the management of people and their resources at all levels as pointed out by the World Bank (1993). To offer public services effectively and efficiently and within the parameters acceptable to all, various institutions and those in power all over the world have laid suitable and workable strategies of human resource and organizational capacity building while focusing on performance improvement.

According to Goldstein (2002) strategic human resource and organizational capacity building is regarded as a tool of new public management aiming at rendering quality services to various stakeholders. The same is perceived to create an atmosphere of self-confidence and alteration of workers' mindsets to work positively. The term Human Resource is often used to refer to the skilled manpower required and deployed in an organization focusing on achieving its core objectives and values. UNDP (1998) defined capacity building as a combination of a country's human, scientific, technological, organizational and institutional resource capabilities which addresses and evaluates crucial policy issues and their implementations as well the same may be applied to refer to the development of human capital either at the individual or societal level in the enhancement of skills and knowledge to achieve sustainable and measureable results. Austin (1996) pointed out that Performance Improvement is a concept used to monitor whether the results obtained in an organization are aligned to its strategic goals in terms of increase and customer satisfaction in other words it refers to the attainment of a new level of performance superior to the previous one.

It is widely acknowledged that an organization's ability to innovate and create value is strongly related to its intellectual capital (IC) (Subramaniam and Youndt 2005). In the public sector context, intellectual capital has been defined as an organization's ability to use its knowledge resources for organizational learning, innovation and improved service delivery (Bontis 2002; Kelly 2004). Given that stocks and flows of human capital (employees' genetic inheritances, education, knowledge, skills and attitudes) are considered to be a primary driver of stock and flows of intellectual capital (Bontis and Fitz-enz 2002; Lepak and Snell 1999; 2002; Nerdrum and Erikson 2007), it can be argued that to create public value, organizations must have the human capabilities and capacities to develop new ways of working and new models of management. This

assertion is supported by a well-established literature on the importance of human capital to organizational performance, written from the perspective of educationalists, economists, sociologists, psychologists and human resource development specialists (Carmeli 2004).

The Scottish Government has invested significantly in the human capital stocks and flows of the public sector through various training and development initiatives, leadership programmes, and increased spending on pay and rewards for doctors and teachers among others (Scottish Executive 2006). However, a recent report by the suggested that a good deal of this investment has been based on the human resource assumption that investing in attracting, motivating, developing and retaining talented individuals pays off directly in terms of more effective organizational performance. Moreover, the relationship between human capital and organizational value creation is mediated by an organization's stock and flow of intellectual capital, and so is subject to a number of other causal variables, including social and organizational capital (Bontis & Serenko, 2007).

## CONCLUSION AND RECOMMENDATIONS

The study examined power sector reforms and service delivery by Abuja Electricity Distribution Company in Nigeria (2005-2015). Building on the above premises, it can therefore be concluded that, any government that means to succeed must be prepared to have above board and invoke the enthusiasm or unleash the energies of the masses for rapid development. When the government attains a high infrastructural development ground, it can successfully implement and realize tangible socio-economic goals that would enhance the wellbeing of the citizenry and the society at large.

Therefore, the Nigerian government needs to find the right mix amongst the various variables and factors driving the power sector reform, that determine the success and failure of its goals of making epileptic power supply a thing of the past. Such variables as finance, human resource, electricity charges should be properly planned, managed and administered so as to bring about the desired goals. Such should be the watch ward of the Abuja Electricity Distribution Company in Nigeria.

### Recommendations

The following recommendations are provided:

i. Abuja Electricity Distribution Company should ensure that adequate provision must be made to streamline power sector funding in such a way to increase power supply so as to improve the amount of service delivery by Abuja Electricity Distribution Company In Nigeria.

ii. The company should be properly staffed by increasing the power sector labour force with those who are well experienced both in terms of quality and quantity

of staffs as well as making provision for training and retraining of employees', good remuneration and life assurance coverage of employees' to motivate them for effective electricity service delivery in Nigeria.

iii. The company should be properly staffed by increasing the power sector labour force with those who are well experienced both in terms of quality and quantity of staffs as well as making provision for training and retraining of employees', good remuneration and life assurance coverage of employees' to motivate them for effective electricity service delivery in Nigeria

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