



## Issues and challenges in the Privatized Power Sector in Nigeria

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**Abstract.** Various attempts by successive Nigerian governments at industrialization and rapid economic growth have been hampered by energy infrastructure deficit gap. Constant and adequate power supply is an important condition for industrialization. Many efforts have been made to close this gap including privatization. The economic rationale behind privatization includes efficiency among others. Therefore, the privatization of the power sector is aimed at tackling the myriads of problems in the sector: limited access to power, inadequate generation and usage of power capacity, overlapping/conflicting roles and responsibilities between government and holding companies etc. Apart from the above, unbundling of the power sector is now becoming a global practice. This paper therefore examines the efforts at revamping the sector before privatization/unbundling, with special focus on the issue and challenges that confronts the sector after privatization: inadequacy of gas for firing turbines, community issues over bidding and ownership, cost recovery challenge due to over - priced power plants, transmission issues, the Multi Year Tariffs Orders, end user tariffs, labour and workforce, assets and liabilities of holding company etc. It is the view of this paper that if these issues are solved and the challenges tackled, then would a solid foundation for actualization of Vision 20:2020 laid for a rapid industrial development that will transform Nigeria to a highly industrialized economy.

**Keywords:** Power Sector, Privatization, Unbundling, Reform.

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## Introduction

The provision of regular, affordable and efficient electricity is crucial for the growth, prosperity, national security as well as the rapid industrialization of any society. It is also a truism that any nation that desire to develop will ignore the power sector at its peril. One of the prominent infrastructure deficit gaps in Nigeria is in the area of power. Nigerian electric power has been so epileptic that the Nigerian economy has been described as a generator economy (Ekpo, 2009). The Manufacturers Association of Nigeria (MAN) and the National Association of Small Scale Industries (NASSI) estimated that their members spend an average of about N2billion (about \$12 million) per week on self-power generation (Vanguard, 23rd February, 2013). A series of power sector polls conducted by NOI Polls Ltd for the second quarter of 2013 revealed that about 130 million, representing 81 per cent, out of the 160 million Nigerians generated their own electricity through alternative sources to make up for irregular power supply. The study also showed a combined average of 69 per cent or 110 million of Nigerians experienced greater spending on alternative electricity supply (Vanguard, January 28, 2014).

A recent statistics on use of generating sets in the country released by the Director-General of Centre for Management Development, Dr. Kabir Usman, revealed that about 60 million Nigerians spent N1.6 trillion on generators annually (This Day Live, November, 5 2013). The endemic power crisis came as a result of the inability of the existing plants to meet the ever increasing demand. The supply-demand gulf exist because of myriads of reasons: obsolete and dilapidated plants with 36% of installed capacity are over 20 years old; 48% are over 15 years old and 80% are over 10 years old (Adenikinju, 2003), lack of and poor maintenance of existing plants and poor managerial efficiency. The country's current power generation stands at 3,800 Megawatts and the per capita electricity usage is 136 kilowatt/hour. Nigeria's electricity consumption on a per capita basis was among the lowest in the world when compared with the average per capita electricity usage in Libya, 4,270KWH; India, 616KWH; China, 2,944KWH; South Africa, 4,803 KWH; Singapore, 8,307KWH; and the United States, 13,394KWH (Punch, December 26, 2013). 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 KWh per head, – well behind Gabon (900.00); Ghana (283.65); Cameroon (176.01); and Kenya (124.68) (Vanguard, February 26, 2013).

The electric power industry across the world is being deregulated at the wholesale price level. The policy change, in whatever form it finally 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, H. C. and David, H.2002)

Energy is an important input to production. Therefore, without electricity mass production of goods becomes virtually impossible. While erratic supplies of electricity disrupt production, voltage fluctuations negatively affect the durability of machines. Better electricity-related infrastructure can, thus, raise the efficiency and durability of physical capital. It is against this backdrop that this paper examined the issues and challenges in the privatized power sector in Nigeria in an attempt at finding lasting solution to an endemic problem.

### **Trajectory of the Power Sector Reform.**

In 1999, when the nation returned to democratic rule the government embarked on various infrastructural rehabilitation and expansion of development programmes. It is within these rehabilitation and expansion moves that involves the reforms in the power sector. The power sector as at that time was characterized by myriads of challenges even as it is now. These challenges include limited access to infrastructure, low connection rates, inadequate generation and usage of power capacity, ineffective regulation, high technical losses and vandalism, insufficient transmission and distribution facilities etc. In response to this alarming situation of Power generation between 1999 and 2000, the Federal Government of Nigeria (FGN) undertook aggressive rehabilitation of power infrastructures between 1999 and 2004 which (Lawal, 2008) referred to as the Infrastructure Rehabilitation phase of

the reform. A major part of this phase is the National Integrated Power Project (NIPP). The NIPPs were initiated in 2004 to boost electricity generation capacity by the opening of gas power stations across the country ( Okolobah,V. &Ismail,Z.,2013). This was followed as part of the reform in the electricity sector by the decentralization and the granting of licenses to different Independent Power Producers (IPPs). This phase of the reform tagged the Infrastructure Expansion Phase has as part of its components the granting of licenses to investors to establish private power plants known as the Independent Power Projects (IPPs). 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).

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 operationalising 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:

- Privatisation commences: December 2010
- Submission of bids: July 2012
- National Council on Privatisation (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 the first phase of the power sector privatisation process, the Federal Government on November 1, 2013, handed over to private investors the 11

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 \$1.256 billion. The breakdown of the preferred bidders for the Electricity Distribution Companies (DISCOs) as approved by the National Council of Privatisation (NCP), are as follows: Kann Consortium won Abuja Distribution Company at \$164 million; Vigeo Power Consortium for Benin at \$129 million; West Power & 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).

## **ISSUES AND CHALLENGES.**

### **The challenge of initial take-off**

Despite the privatization of PHCN in 2013, Nigeria's electricity generation capacity has declined from the peak generation level of about 4,517.6 mega- watts (MW) recorded in December, 2012 to about 3,670 MW in January, 2014.The electricity generation forecast was 12,800 MW of electricity, energy generation capacity 3,670 MW hour per hour (MWH/H), while actual electricity sent out into the national grid was 3,585.32 MWH/H. (nigeriapowerreform.org).

According to the recent poll by NOIPolls Limited Electricity supply in Nigeria worsened in the fourth quarter (Q4) of 2013, at the peak of the privatisation process.



According to the report, although power supply to households worsened in Q4, nevertheless, majority of Nigerians (70 percent) were hopeful about the ongoing reform in the power sector. The report indicated that an average of 46 percent of Nigerians received between 1-4 hours of continuous power supply daily, while 17 percent said they have received absolutely "No Light" in their households. The Poll however, noted that in Q4, the Nigerian power sector saw an achievement of a milestone as the privatisation process, initiated to reform the power sector was taken to the next level (Vanguard, 28, 2014). The Transmission Company of Nigeria is also facing initial challenge of fund as it requires about \$4.4billion to increase power transfer capacity, make the network more stable and reliable, and improve efficiency of electric power transfer by reducing transmission technical losses and enable TCN to increase transmission capacity to 16843 MW by end of 2018 (Vanguard, March 1<sup>st</sup>,2014)

## **Funding**

The power sector is a highly capital intensive industry. Many of the investors that acquired the unbundled PHCN borrowed money from banks and having acquired these loans from these banks, continuous financing of the projects will become a herculean task. Nigerian banks provided 70 per cent of the funds in loans and equity of the N404bn paid for the power assets. The acquired loans and Federal government intervention funds disbursed through Money Deposit Banks will not be sufficient to fast track the rapid turn- around expected in the sector. Further challenge is that the estimated \$4.28bn required capital expenditure and rehabilitation expenditure which is hoped to be provided by indigenous banks (Punch, Dec.26, 2013).Having acquired PHCN subsidiaries, The Bureau of Public Enterprises Director General declared that the distribution companies (Discos) would be required to spend a total of \$357.7m in 2013 alone. Of the \$357.7m, the Abuja Disco would be expected to invest \$36.6m; Benin, \$24.3m; Enugu, \$27.2m; Ibadan, \$43.86m; Jos, \$22.75m; Kaduna, \$29.96m; and Kano, \$30. 38m. Others are the Eko Disco, \$45.2m; Ikeja, \$58.74m; Port Harcourt, \$25.5m; and Yola, \$13m. The

expected spending by Discos is to cover the following areas: metering, health, safety and environmental practices, reduction in the number of customer interruptions due to network faults, new customer connections and network expansion, improving customer services and complaints handling procedures. Some of the successful bidders have not completed the payments as many of them still own the federal government. According to the Nigerian Electricity Regulatory Commission of the 11 electricity distribution companies in the country, only three have so far remitted to the Federal Government money due it (Punch, February, 26, 2014).

### **Inadequate Gas supply**

The power sector reform is anchored on the use of gas to power systems in order to meet the needs of the country. The availability of gas to ensure consistency in power supply has been a great challenge. This challenge is a result of the inadequate infrastructure needed for gas gathering, processing and transportation. The negative effects of saboteurs and vandals in gas production affect the availability of gas. Gas supply to the power plants was not taken into consideration that this will affect the operation of the power. For instance approval for the construction of some plants like the Alaoji 1074 mega-watts (MW), Egbema 338MW, Geregu 848MW and Omotosho 786MW gas turbines by the Obasanjo's administration did not factor in the issue of gas supply to these plants. The resultant effect is that these plants have remained unutilized long after they were commissioned.

### **Consumers' fraudulent practices**

There are many fraudulent practices by many electricity consumers that were ignored by the former PHCN either due to lack of information or with the active connivance of dubious staff of the organization. These fraudulent activities reduce the income generation of the former PHCN. If left unchecked it will hinder revenue of the new owners of the privatized PHCN. These offences were committed when consumers and utility staff resort to unlawful direct hooking from line; bypassing

energy meter; injecting foreign elements into the energy meter; drilling holes in electro-mechanical meter; or assigning illegal amount of energy units to consumers.

### **Determining the end user tariffs**

The efficient pricing of electricity is central to a well-functioning power sector. Power pricing guides investment decisions and is critical for cost recovery. It also signals to users the cost of marginal consumption and should ideally encourage the optimal utilization of installed capacity. But achieving efficient power pricing is easier said than done. The power sector is characterized by substantive up-front fixed costs, and it takes many years for capacity to be fully utilized. Beyond that, costs vary across times of the day (peak/off-peak), seasons (dry/rainy), users (residential/commercial), and geographic areas (urban/rural), which should be taken into consideration when setting prices that promote efficient use (Briceño-Garmendia, C. & Shkaratan, M., 2011). Electricity prices in Nigeria are currently below production costs. Therefore, the industry is barely able to generate enough revenue to cover its operating costs let alone meet its considerable capital expenditure needs. This is a huge challenge that new owners will have to contend with as they cannot source for fund from government the way PHCN did. Whatever approach that the new owners will adopt must take into consideration the ability of the end users to pay. Technicality behind setting efficient tariffs were complex, power providers and regulators also face a conflict between promoting economic efficiency and societal well-being. As Borenstein (2008) observed that if income-challenged groups are to enjoy the benefits of power provision, policy makers must set affordable tariffs below production costs or introduce an explicit subsidy regime.

In an attempt to address this tariff issue, Nigerian Electricity Regulatory Commission (NERC) has been charged with the dual function of ensuring that the prices charged by licensees are fair to the consumers and sufficient to allow the licensees to finance their activities and to allow for reasonable earning and profits for efficient operation. NERC has developed a new tariff approach called the Multi Year Tariff Order, MYTO. At the centre of this is an order that calculates electricity

prices based on revenue requirements of the whole industry. The workability of this approach remains to be tested when full takeover and operation commences.

### **Reconciliation of assets and liabilities of PHCN**

The unbundled PHCN was poorly managed which was one of the reasons why it could not sustain itself by generating enough revenue to remain in operation. Therefore there is the challenge of not having comprehensive information detailing the assets and liabilities of the erstwhile PHCN. In a bid to solve this issue the Federal Government set the Nigerian Electricity Management Company (NELMCO). It is serve as a government Special Purpose Vehicle based on the understanding that it would assume and manage extant assets, liabilities and other obligations that could not be easily transferred from PHCN to the Successor Companies. There will likely arise conflicting interest between the new investors and the government over the quality of assets that were privatized as the assets will require additional huge investment to upgrade the assets to standard that will ensure smooth running of the equipment. Government as equity shareholder may be unwilling to commit substantial amount to such investments

### **Workforce**

The former employees of PHCN like every employee of privatized companies elsewhere have been averse to the privatization of the sector. The fear of the future of their employment created the initial resistance to the unbundling process. Some of their initial concerns that bothers on arrears in salaries, pensions, severance and other benefits) owed to them had been taken care of. What could pose further challenge are issues that hinges on the criteria to be adopted in choosing those to be retained and those to be laid off. This become an issue when most of them were retained to keep the business going even when their severance allowances had been paid with the hope that they will be reabsorbed. This might create room for sabotage from disappointed staff.

## Conclusion

There is no doubt that the attempts by successive Nigerian governments culminating in the Power Sector Roadmap an integral component of the Transformation Agenda of President Goodluck Ebele Jonathan are no doubt bold steps towards the rapid development of the economy. However, the challenges and issues examined here will no doubt significantly affect the aims and objectives of the reform. There is therefore the need by the government to boldly tackle these issues and challenges. The power sector is indeed a very important sector critical to the rapid transformation of any economy. Therefore the reform is in the right direction. The challenges mentioned here are by no means exhaustive, if the Government can intervene and resolve them, it will create a peaceful environment for the new investors to operate.

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