POWER SECTOR REFORMS

THE PROBLEM

The growth, prosperity, and national security of any country are critically dependent upon the adequacy of its electricity supply industry. 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.

Over the past two decades, the stalled expansion of Nigeria's grid capacity, combined with the high cost of using diesel and petrol to generate power, has crippled the growth of the country's productive and commercial industries and stifled the creation of jobs which are urgently needed in a country with a large and rapidly growing population. The erratic and unpredictable nature of electricity supply has engendered a deep sense of frustration that is felt across the country as a whole and in its urban centres in particular.

Electricity consumers and the citizenry as a whole have been insistent in demanding a fundamental reversal of the long and debilitating malaise that has blighted the industry and, in doing so, bridled the tremendous energy and creativity of this great and populous nation. Specifically, they have been demanding real and immediate improvements in service levels.

Meeting the Nigeria Vision 20:2020 target of 20,000MW will require investments in power generating capacity alone of at least US$3.5 billion per annum for the next 10 years. Corresponding large investments will also have to be made in the other parts of the supply chain (i.e. the fuel-to-power infrastructure and the power transmission and distribution networks). The federal government alone cannot provide these sums. Rather, central to the development of the sector will be the need to incentivise the private sector to partner with government in this endeavour. At the same time, however, the federal government is acutely aware that improvements in service levels cannot wait until the industry has been fully commercialised. The government is, therefore, taking active steps to ensure modest but genuinely realisable improvements in the amount and quality of electricity supplied to customers in all regions of the country.

The goal of the power sector reform is to provide access to affordable and reliable electricity supply for Nigerians to sustain economic growth, alleviate poverty, and create jobs. The operational policy objective is to improve the electricity system in a sustainable manner and provide the business environment for active private sector participation in the power sector in the medium term.

REFORM ACTIONS

Post 1999, under the Obasanjo era, the government expressed its determination to tackle the poor state of the power sector. Its first steps were: to set up a technical board to tackle the issue of collapsing infrastructure, rehabilitate some of the generation stations, transmission and distribution infrastructure; to commence the unbundling of NEPA for the improvement of efficiency; and to prepare the grounds for private sector participation.

The Technical Board between 2000 and 2001 embarked on the above and succeeded in improving generation capacity from 1,800MW to just below 4,000MW. In addition, the Electricity Power Sector Reform Act (EPSRA) was passed and signed into law in 2005, which gave birth to Power Holding Company of Nigeria (PHCN) and the restructuring exercise to, amongst others, achieve:-

(1) Development of competitive electricity market and creation of market operations

(2) Creation of successor companies out of the PHCN structure

(3) Private sector participation (Independent Power Plants (IPPs), joint venture (JV)

(4) Establishment of Regulatory Agency

(5) Establishment of a Rural Electrification Agency

(6) Establishment of Power Consumer Assistance Fund

With this support from the federal government, the sector began to witness better funding, that led to substantial improvements in generation capacity, transmission, and distribution networks.

ROAD MAP FOR POWER SECTOR REFORM

The current Administration in August 2010 launched the Road Map for Power Sector Reform to actualise the fundamental objectives of the Electricity Power Sector Reform Act (2005). The Roadmap for Power Sector Reform outlines plans to accelerate the pace of activity with respect to reforms already mandated under the EPSR Act and, at the same time and in support of this, a renewed drive to improve on short-term service delivery. The Roadmap, with its emphasis on privatisation of power generation and distribution and the construction of a new transmission network is expected to reduce substantially the binding infrastructure constraints.

PRESIDENTIAL ACTION COMMITTEE ON POWER (PACP)

The Presidential Action Committee on Power (PACP). The PACP was set up in May 2010. It is chaired by President Goodluck Jonathan with the Vice-President Namadi Sambo as Vice-Chairman. It was established by President Goodluck Jonathan to provide leadership and guidance for the speedy development of Nigeria's power sector as well as determine the policy direction and strategic reform focus. It was recently reconstituted on September 5, 2012 to oversee the implementation of the Federal Government's agenda for power sector reform and ensure the reform momentum is sustained.

The PACP consists of Ministers and Heads of Agencies that have a critical role to play in Nigeria's Power Sector. It acts like a "War Cabinet" or a dedicated Federal Executive Council (FEC) for Nigeria's power sector, setting and granting expedited approvals for critical decisions. The PACP meets every Tuesday, ensuring that all issues connected to the power sector enjoy priority attention at the highest level.

PRESIDENTIAL TASK FORCE ON POWER (PTFP)

The Presidential Task Force on Power was established by the President Goodluck Jonathan administration, in June 2010, to drive the implementation of the Reform of Nigeria's power sector. It brings together all the Agencies that have a role to play in removing legal and regulatory obstacles to private sector investment in the power industry. It also has the mandate to monitor the planning and execution of various short term projects in generation, transmission, distribution and fuel-to-power that are critical to meeting the stated service delivery targets of the power reform roadmap.

The PTFP closely with various Ministries and Agencies that have specific contributions to the reform process, including the Federal Ministry of Power, the Federal Ministry of Finance, the Bureau of Public Enterprises (BPE), the Nigerian Electricity Regulatory Agency (NERC), the Nigerian National Petroleum Corporation (NNPC), the Bureau of Public Procurement, National Gas Company Limited (NGC) and the Power Holding Company of Nigeria (PHCN) to mention a few.

The Presidential Task Force on Power (PTFP) is dedicated to accelerating the delivery of all the milestones provided in the Power Sector Reform Roadmap which President Goodluck Jonathan launched in August 2010. The PTFP is charged with the responsibility of developing, monitoring, facilitating and fast tracking the power sector roadmap delivery targets to set the stage for the irreversible transformation of the power sector from a moribund sector to a viral, self-sustaining and largely privatised Nigerian Electricity Industry.

President Goodluck Jonathan reconstituted the PTFP with Engr. Reynolds Bekinbo Dagogo-Jack as Chairman in September 5, 2012.

NIGERIA ELECTRICITY REGULATORY COMMISSION

The Nigerian Electricity Regulatory Commission (NERC) is empowered to provide regulatory oversight in the power sector. Its functions include:

(1) Licensing and regulating persons engaged in the generation, transmission, and distribution of electricity

(2) Creation, promotion, and preservation of efficient industry and market structures Maximising access to electricity services by promoting and facilitating customer connections to distribution systems in both rural and urban areas

(3) Ensuring adequate supply of electricity to consumers

(4) Ensuring that the prices charged by licensees are fair to consumers and are sufficient to allow the licensees to finance their activities and to allow for reasonable earnings for efficient operation

(5) Ensuring that regulation is fair and balanced for licensees, consumers, investors, and other stakeholders

(6) Promoting competition and private sector participation, when and where feasible

(7) Establishing or, as the case may be, approving appropriate operating codes and safety, security, reliability, and quality standards

(8) Establishing appropriate consumer rights and obligations regarding the provision and use of electric services

(9) Approving amendments to the market rules

(10) Monitoring the operations of the electricity market.

The NERC Commissioners were re-appointed in 2010 to continue to undertake regulation that is fundamental to a healthy electricity market and protection of consumers.

TARIFF REGIME

The Electric Power Sector Reform (EPSR) Act of 2005 vests in the Nigerian Electricity Regulatory Commission (NERC) the power to adopt any tariff methodology it deems appropriate for the nation. A Multi-Year Tariff Order (MYTO) was subsequently established with a major tariff review every five years. The law made it mandatory for NERC to adopt a tariff that is favourable to the Nigerian people and investors. The periodic major review does not necessarily imply an increased payment by every consumer. The second MYTO came into effect on 1 June 2012. The NERC apply the MYTO in calculating tariffs, thereby, ensuring effective pricing. By so doing, NERC ensures that Nigerians are not overcharged for the supply of electricity services, as only efficiently and competitively incurred costs can be passed on to consumers. It has commenced the process of MYTO 2 bi-annual review in April 2014

POWER CONSUMER ASSISTANCE FUND (PCAF)

The Power Consumer Assistance Fund is a fund that will be set aside to subsidise the tariff to be paid by poor consumers of electricity in a private sector driven power sector. This subsidy is different from the petroleum subsidy because, among other differences, there is no cash involvement at all in electricity subsidy. The government wants to prevent the less privileged from paying heavily for electricity consumption, a necessity. The eligible consumers will be identified according to their consumption pattern (KWh consumed).

NIGERIAN BULK ELECTRICITY TRADING PLC (NBET)

NBET was established during the transitional stage of the Nigerian Electricity Market Reform. NBET is responsible for bringing power from IPPs and reselling the power to the distribution companies and eligible customers. Its role in the current reform is to use its legal backing to drive to drive private sector investments into the Industry by executing bankable power purchase agreements with power developed and winning bidders in the privatization process

The responsibilities of NBET are as follows:

(1) Management of portfolio of over sixty (60) Brownfield and Greenfield applications towards meeting the requirements for negations and eventual execution of a Power Purchase Agreement (PPA)

(2) Management of the competitive bulk power procument process

(3) Develop and negotiate Power Purchase Agreements (PPAs) with Independent Power Projects (IPPs)

(4) Develop framework for management of the PPAs and vesting constracts for successor GenCos and DisCos

ACHIEVEMENTS

- The conclusion of the PPA with Azura-Edo 450 MW open cycle gas turbine power plant which culminated into the ground breaking by Mr President on the 10th October ,2014.It is the first Nigerian Power plant to benefit from the World bank Partial Risk Guarantee structure
- Other PPAs signed include 307 MW gas fired Olorunsogo power plant and Omotosho Power Plant as well as Rivers State Government's First Independent 721 MW gas fired power plant

NATIONAL POWER TRAINING INSTITUTE OF NIGERIA (NAPTIN)

As part of the Reform process, NAPTIN was established to provide quality training and build capacity in the electricity industry by consolidating the stranded training Centres of the former PHCN into a World class Training Institute. The State of the Art Training and Capacity building programmes is in partnership with National and International Stakeholders.

The achievements of NAPTIN include:

(1) Commenced the development of a fully equipped communication laboratory Centre at its Regional Training Centre, Oji, Enugu State where communication Engineers in Power system of the country and ECOWAS Countries will acquire skill. This is expected to be commissioned in the last quarter of 2014 as well as upgraded some of its Regional Trainig Centers in Afam in Rivers and Gembu in Taraba States

(2) Fortified the Electrical Engineering laboratory at the Kainji Training Centre with the acquisition of new facilities for teaching SCADA and Smart grid technologies

(3) Graduated through its training programme named National Graduate Skills Development Programme (NGSDP) 243 Engineers in November, 2013 and admitted 330 for the 2013/2014 academic year. Some of them had been absorbed by the Transmission Company of Nigeria

(4) Trained 70 Engineers for solar, wind, hybrid renewable energy options at the Regional Training Centre in Kainji

(5) Initiated new structured training programmes in collaboration with the National Open University of Nigeria (NOUN), University of Lagos as well as Enugu State University (ESUT)

(6) Commenced the training of 7,400 personnel under the National Power Sector Apprenticeship Scheme (NAPSAS).Categories of personnel to be trained include Technicians, Artisans and Craftsmen through the Federal and State Governments' sponsorship for one year.

ELECTRICITY MANAGEMENT SERVICES AUTHORITY (EMSL)

The Electricity Management Services Limited (EMSL) is one of the successor companies of the PHCN established by the Federal Government in line with the provisions of Section 8 of the Sector Reform (EPSR) Act 2005 and registered under the Companies and Allied Matters Act (CAMA) in 2007.It was established to carry out Technical Inspection and Certification of all electrical materials, equipment and installations in the Nigerian Electricity Supply Industry (NESI).Its Board and Management Team was inaugurated on the 10th September, 2013.

RURAL ELECTRIFICATION AGENCY (REA)

The operation of the REA was suspended in 2009. However, in recognition of the provisions of the law, especially with the EPSR Act of 2005 and to restore the confidence of investors and the general public in the power sector reform, the Rural Electrification Agency (REA) was fully brought back with the office of a Managing Director replacing that of a Sole Administrator. The objective of REA is to ensure the attainment of much higher access to electricity in rural and semi-urban areas. The federal government has continued to make provision in the annual budget to fund provision of electricity to rural communities and make electricity a fundamental right of every Nigerian.

CONTRACTING OUT AND PRIVATISATION OF NEW BUSINESS UNITS

1. **TRANSMISSION COMPANY OF NIGERIA:** The Transmission Company of Nigeria (TCN) plays a critical role in Nigerian Electricity Supply Industry (NESI), in terms of evacuating power from suppliers to distributors. Investors will be reluctant to make large investments in the upstream and downstream sectors, respectively, of the electricity industry unless they are confident that commensurate investments and efficiency in the midstream sector will also take place. As such, the federal government contracted Manitoba Hydro International (MHI) of Canada with effect from July 2012 to manage TCN by injecting international best practices and technical expertise and ensure the requisite restructuring of the company. MHI is contracted to manage TCN for three years, with possibility of an extension to five years. They have also commenced accelerated ramp up of the management and operational efficiency level of TCN to match the expected profile of the privatised up and downstream assets.

2. **GENERATION COMPANIES (GENCOS) AND DISTRIBUTION COMPANIES (DISCOS):** The process of privatising the 17 successor companies, that is six generating companies and 11 distribution companies commenced earnestly in 2010 after a suspension of the process in 2007. Consequently, 207 interested parties were short-listed from an Expression of Interest call. After several bidding and evaluation processes, the NCP approved 15 preferred bidders for the Power Holding Company of Nigeria (PHCN) generation and distribution companies in its ongoing privatisation programme. The companies which made the 21 August 2013 deadline set by the Bureau of Public Enterprises (BPE) for the outstanding payment for the power assets were West Power and Gas, the preferred bidder for the Eko Distribution Company; NEDC/KEPCO, Ikeja Distribution Company; 4Power Consortium, Port Harcourt Distribution Company; Vigeo Consortium, Benin Distribution Company; Aura Energy, Jos Distribution Company; and Kann Consortium, Abuja Distribution Company. Others include Integrated Energy Distribution and Marketing Company, the preferred bidder for both the Ibadan and Yola Distribution Companies; Sahelian Power, Kano Distribution Company; Transcorp/Woodrock Consortium, Ughelli Power Plc; Amperion, Geregu Power Plc; Mainstream Energy Limited, Kainji Power Plc; Interstate Electric, Enugu Distribution Company; and CMEC/EUAFRIC Energy JV, which made part-payment for the acquisition of Sapele Power Plc.

   In November, 2013 President Goodluck Jonathan formally handed over share certificates and licences to the 15 new core owners of PHCN successor companies. The Federal Government has recorded significant progress in the power sector reform culminating in the November 1, 2013 handover of Generation and Distribution companies to the private sector.

3. ***OPERATIONALISING NELMCO***

   The Nigerian Electricity Liabilities Management Company (NELMCO) was established as a government special purpose vehicle to assume and manage extant assets, liabilities, and other obligations that could not be easily transferred from PHCN to any of its successor companies. The federal government is working assiduously to ensure that NELMCO is made fully operational, fully funded, and that any uncertainties regarding the transfer of residual liabilities are removed.

EFFICIENT AND MOTIVATED WORK FORCE

Fully conscious of the indispensable role workers play in achieving productivity and faster economic growth, the federal government at the inception of the power sector reform and privatisation designed a comprehensive labour policy framework aimed at enlightening the work force and ensuring their mobilisation and active participation in the reform agenda. The agreement reached between the Union and Federal Government in December 2012 has been

largely implemented as over 98% of the 47,913 workers have been paid including severance, pensions and gratuity

GENERATION OF POWER

In pursuance of the dual objectives of achieving diversity in fuel sources for power generation and providing access to electricity for all Nigerians, the Federal Government has been focusing on the development of renewable energy using hydro, solar, wind and biomass. This is in addition to efforts to develop additional power generation capacity fuelled by gas and coal.

The Ministry of Power has worked in close collaboration with the Ministry of Petroleum Resources to improve the availability (from NNPC and other gas suppliers) of gas for power generation in the short term, as efforts continue to be made to improve the commercial fundamentals that will underpin the development of additional gas resources to fuel the increasing demands for gas in the medium and long-terms. These efforts yielded an additional 285 million standard cubic feet of gas per day in 2013 and 100 million standard cubic feet of gas per day in 2014 up to end-August.

TRANSMISSION

Nigeria's power sector transmission infrastructure continues to be challenged, as it still remains a weak link in the electricity supply chain. Moreover, even with the completion of the transmission projects, the gap between generation capacity and the capacity of the grid is expected to remain. Nevertheless, despite the prevalent funding constraints, TCN completed a number of projects that included construction of transmission lines, substations at both 330KV and 132 KV levels and transformer reinforcements. The completion of these projects resulted in achieving added capacities in 159 KM of transmission lines and 1590 MVA (1372 MW) transformer capacity. By end of 2014 additional 750 KM transmission lines and 1640 MVA will be achieved. The resultant effect of this development would be substantial reduction of 132/33 KV interface problems and increase of wheeling of the grid.

DISTRIBUTION

There has been an increase in the distribution network from 6,360 MW in January 2012 to 7,350 MW in December 2012. Many obsolete and unserviceable types of switchgear have been retrofitted to enhance network reliability and system stability. The national average hours of supply in certain major cities increased from 12 hours to 16 hours.

WORK FORCE

Through government's engagement, the work force that at the initial stage was characterised by daunting challenges with serious consequences on operational efficiency and financial risks to potential investors is now epitomised by the series of successes achieved by the reform in reaching agreements with the workers on settlement of outstanding monetisation arrears, regularisation of 10,000 casual workers, salary increase, and payment of severance pension and other benefits.

The federal government has implemented the agreement and payment of severance benefits to workers.

MAIN ACHIEVEMENTS

The key achievements of the Power Sector Reform are:

1. Power generation increased from 3,514MW in 2011 to over 4,600MW as at November 2014. Substantial progress has been made towards an optimal electricity generation mix.

2. The Power Sector Roadmap is being implemented leading to the following:

    1. Unbundling of the PHCN into six generating companies (GenCos), one transmission company, and 11 distribution companies (DisCos)

    2. Licensing of 34 IPPs, of which three (AES Barge Limited, Okpai and Afam VI) have commenced operation

    3. Establishment of the Nigerian Bulk Electricity Trading (NBET) Plc.Signed a Funds Management Agreement with the Nigeria Sovereign Investment Authority for the $350m allocated to it from the $1b Eurobond issued by the Federal Government of Nigeria.

    4. Sustained implementation of Road Map on Power leading to the privatisation of the generation and distribution aspects of the power sector. Companies have been transferred to their new owners.

    5. Construction of 10MW wind energy generation plant in Katsina State to add to the nation's energy mix.

    6. Development of a sustainable transmission capacity expansion to provide adequate highway for wheeling generation.

    7. Delivery by NIPP of critical transmission projects.

    8. Delivery of gas-to-power projects that increase generation levels significantly.

    9. Appointment of MHI and accelerated ramp up of the management and operational efficiency level of TCN to match the expected profile of the privatised up- and downstream assets.

    10. Review of the electricity Multi-Year Tariff Order (MYTO) with a view to making the electricity tariff cost reflective to attract private sector investment and new Tariff (MTYO 2) instituted June 2012.

    11. Reconstituted the Board of Nigerian Electricity Regulatory Commission (NERC).

    12. Funding of Rural Electrification Agency (REA).

    13. Resolution of labour issues.

    14. Establishment of a ₦30 billion Power and Aviation Intervention Fund (PAIF) by the CBN to provide concessionary long term credit to power and aviation projects.

    15. Seplat Petroleum Development Company Plc invested US$300 in new gas processing facilities at its Oben Gas Plant.

    16. A US$1 billion financing deal for the flagship of 450 megawatt Azura-Edo Independent Power Plant (IPP), in Edo State was signed between the Federal government and Azura Power Holdings Ltd. The ground breaking ceremony was done by Mr. President on October 10th, 2014.

KEY CHALLENGES AND MITIGATION

Some of the challenges hindering full realisation of the objectives of the power sector reform are:

S/N	CHALLENGES	MITIGATION
1.	Funding: The financial needs of the sector are clearly beyond the annual federal government budgetary provisions. Additional funds are required to fund critical infrastructure and development in generation, transmission, and distribution value chains that have been neglected for decades	Federal Government approval for the reinvestment of $1,72b to fund new Hydro and Transmission projects. Provision of Intervention Fund by Government through CBN in the sum of N213billion for legacy debts as well as the shortfall in revenue to stabilize the system
2.	Low transmission capacity, which means that a lot of power that is generated is lost	Intervention by Federal Government of Nigeria to boost transmission Release of $135.55m Euro bond loan to TCN for Infrastructure expansion
3.	Inadequate gas supply to the power stations	Cooperation between stakeholders, Federal Ministry of Power, Ministry of Petroleum Resources, Gas Company of Nigeria as well as Intervention by CBN
4.	Technical and operational human resource gaps in the sector as more NIPP projects come into the grid	NAPTIN National Graduate Scheme Development Programme and National Power Sector Apprenticeship Scheme (NAPSAS) programme by the Federal Government
5.	Sabotage and constant vandalisation of gas pipelines and other power facilities.	Pipeline Surveillance and Protection, Collaboration with Security Agencies including the Civil Defense
6.	Long drawn-out labour disputes following privatisation exercise.	Labour issues settled by the government.
7.	Sustainability issues.	Restructuring and retooling of various Agencies including the Ministry Empowering relevant agencies with legislation
8.	Inefficient Billing and Collection System.	Ongoing revalidation of ATC&S loss profiles by all Discos Increased Scrutiny of collections Bridging the metering gaps

ASSESSMENT OF THE REFORM INITIATIVE

Assessed against the 10 criteria for judging the success of government reform initiatives, the progress made in this sector following the successful privatisation exercise is gradually stabilizing.

S/No.	Assessment Criteria	Result of Assessment
1.	Have the reforms improved the quality and quantity of the public services delivered?	The Reform process in the Power Sector has progressed steadily with increased power generation and gradual improvement in the transmission wheeling capacity.
2.	Do more people now have access to services, including disadvantaged groups such as women, young persons, and people with disabilities?	Citizens now have marginally better access to electricity supply in both urban and rural areas, but this is not yet sufficient for it to be noticeable by many citizens. The number of hours per day that citizens expect to have electric power supply has increased marginally.
3.	Have the reforms reduced the cost of governance?	The power reform has reduced the cost of governance. With the sale of both the generation and distribution companies to private sector operators, the government is no longer saddled with their huge cost outlays.
4.	Have the reforms made the service more affordable for citizens?	The reforms have given more people a fair and balanced consumer price. The days of crazy estimates of power usage seem to be over. The Power Consumer Assistance Fund (PCAF) will be provided to subsidise tariff paid by poor consumers.
5.	Have the reforms reduced1. corruption?	The reforms have led to a reduction in corruption in the power sector. The issues of ghost workers, inflated contract prices, and estimated bills are now a thing of the past.
6.	Have the reforms reduced unnecessary bureaucracy and red tape?	Power sector reforms have reduced bureaucracy and red tape. The incidence of consumers being unable to monitor the operations of their electricity consumption is now virtually non-existent.
7.	Is the reform initiative likely to lead to improved development outcomes?	Electricity supply improvement will lead to socio-economic development outcomes.
8.	Are things improving, staying the same, or getting worse?	Things are improving gradually. There have also been increases in the average hours of power availability.
9.	Where things are improving, will those improvements endure?	Improvements that have been made are likely to endure. There have been substantial increases in power generation every year. For example, the 3514MW produced in 2011 was increased to over 4600MW in 2014.
10.	Where things are not	Not Applicable

S/No.	Assessment Criteria	Result of Assessment
	improving, what should be done?	

Next Steps

1. The power sector has improved in recent years, but the sector requires additional funding to increase generation as well as enhance distribution capacity. There is need for additional funding by the private sector owners of the GenCos and DisCos to supplement current investment by the federal government.
2. The federal government is collaborating with private sector owners of DisCos, GenCos, and MHI to bridge technical and operational manpower gaps.
3. Strengthen the Transmission Sector by addressing legal and policy constraints militating against transmission networks as well as attract more private sector capital
4. Finally, there is coordination amongst operators, regulators, gas suppliers, security agencies, and other key stakeholders to combat sabotage and constant vandalisation of power infrastructure.