

Nigeria Energy Sector Transformation, DFID, USAID, and the World Bank

Sandra van Niekerk, Yuliya Yurchenko and Jane Lethbridge

‘Nigerians are getting angry. We are asking for a decentralised system of community-controlled solar and wind power. Privatisation doesn’t work on any count’. ¹ Ken Henshaw, founding member of *Social Action* – NGO fighting for energy democracy in Nigeria since 2007

Overview

Nigeria has a growing population of more than 179 million and about 8 000 MW of installed electricity capacity but it only generates about 4,000 megawatts. In order to meet the needs of the economy, the government estimates that it needs 40 000 MW by 2020. Demand for electricity far outstrips supply, and many homes and businesses have their own generators, making Nigeria one of the largest markets for individual generators. Temporary diesel-generated capacity provides five times more electricity than the national grid. The country is faced with frequent power outages, and there is a high rate of transmission losses. ^{2 3}

Ken Henshaw, energy democracy activist, claims that ‘in such a huge country with bad infrastructure, it doesn’t make sense to have one central power system’. He argues that the approach of privatisation as a way out of the electricity problems facing the country was imposed on Nigeria by Bretton Woods institutions ⁴ There is inequality of access so ‘poor Nigerians (67% of the country) cannot get any electricity’. According to Ken Henshaw, there are ‘3 big problems with the new privatized power system. First, the cost of energy has gone up a lot in the 4 years since they agreed the privatization. Second, people have to pay a new fixed charge just for the connection - even if there is no power. This is very unfair on the poor, and there have been protests already. Third, Nigerians do not pay for how much electricity they use. Their bills are estimated and they must pay whatever they are asked to pay’.⁵

The electricity sector has been undergoing major reforms since the 2005 Electric Power Sector Reform Act, which liberalised the electricity sector, provided for the development of a competitive electricity market, and paved the way for privatisation. This Act was developed with the assistance of the World Bank.

In 2007, the Nigerian Infrastructure Advisory Facility (NIAF) was set up. It was created and funded by the UK Department for International Development (DFID) and is managed by Adam Smith International (ASI), a branch of the Adam Smith Institute, which promotes free market policies. The aim of DFID’s involvement in energy sector reforms was to reduce power shortages which are considered to hinder economic growth. The NIAF has three main areas of work: privatization by increasing the participation of the private sector; market reform by helping with the creation of the Transitional Electricity Market (TEM) and then the Medium Term Market (MTM); service delivery – focusing on the maintenance and expansion of power generation, transmission and distribution capacity. The NIAF also works on other types of infrastructure, such as transport and urban

development. The budget of NIAF I, which was meant to run from 2007 to 2011 started off at £13.5 million in 2007, and by 2011 had been increased to £32.6 million.⁶⁷

The President's Action Committee on Power (PACP), supported by the Presidential Task Force on Power (PTFP) was established by President Goodluck Jonathan in 2010 to drive power sector reform. In September 2012, President Jonathan reconstituted the Board of the PTFP, asked NIAF and DFID to take two seats on the board, and appointed NIAF as expert consultants to the PTFP. This restarted the energy privatisation process. Since 2010 NIAF has worked with the Bureau of Public Enterprises (BPE) to design and implement the largest and most comprehensive programme to attract private sector investment in power in Africa.⁸

In 2011, DFID make available a grant of up to £48 million over 5 years (2011 – 2016) to provide continued technical assistance to the Government of Nigeria for a second phase of the Nigeria Infrastructure Advisory Facility (NIAF II). This was increased in 2013 by £50 million to bring the total to £98 million. \$18.6 million will be spent on improving Government capital spending and sector wide reform, including the privatisation of the power sector.^{9 10}

NIAF 2 funding was based on providing support to the power reform process and aimed to generate sustained improvement in power supply because: (i) all the generating plants and distribution systems currently owned or being built by the Nigerian government will have been sold or issued as concessions to private firms; and (ii) a power market will have been created in which each part of the value chain is commercially viable, and systems such as metering and settlement are working. The NIAF team worked closely with the International Finance Corporation (IFC) and the Private Infrastructure Development Group (PIDG) on analytical methodologies.¹¹

The PIDG is a multi-donor organisation, set up and funded by the donor bodies of a number of different governments, such as DFID in the UK, to promote private sector investment and involvement in infrastructure projects in developing countries. It explicitly uses government aid funds to support the private sector.

Establishment of the Nigerian Electricity Market

The aim of the reform process is to establish a fully-competitive electricity market which was expected to remove obstacles to an effective and functioning electricity sector – namely the monopolistic nature of the sector, and the cost insensitivity of electricity tariffs.

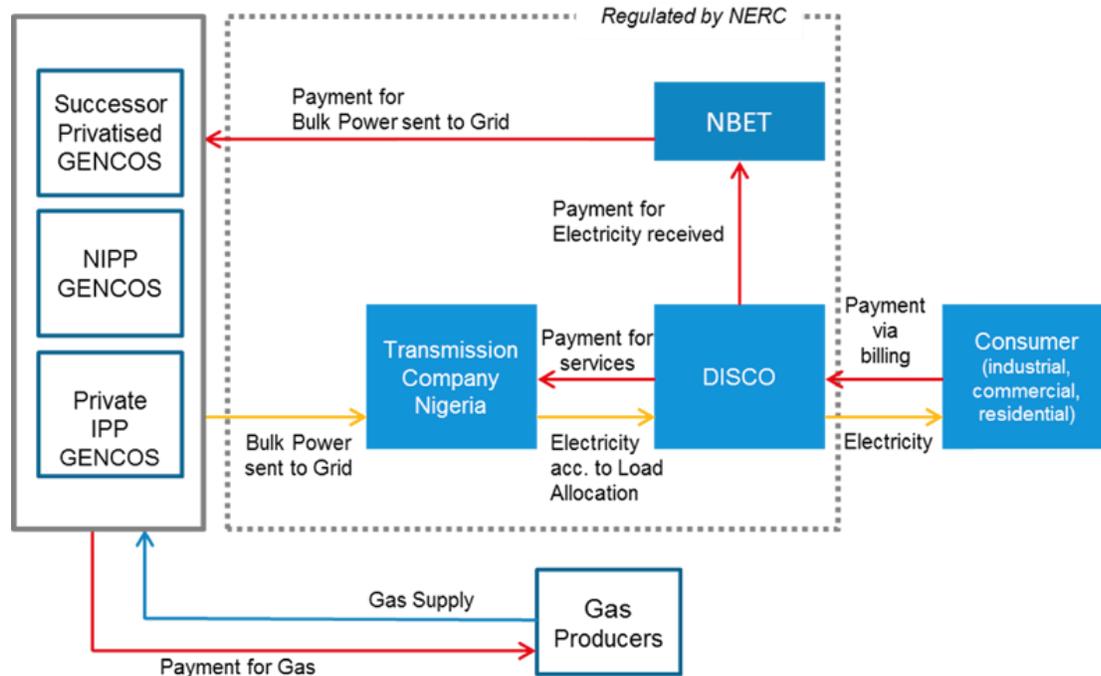
There are meant to be three stages leading towards the development of the Nigerian Electricity Market:

Stage one: transitional market stage: full wholesale competition for the market.

Stage two: medium-term market stage: full wholesale competition for, and in the market

Stage three: final market stage: open to full wholesale competition and retail competition; with a multi-buyer model; private sector driven; cost reflective market structure; and full competition is encouraged.

The transitional stage of the Electricity Market (TEM) began in February 2015. The structure of this TEM is outlined in the diagram below:



From: GIZ (2015) The Nigerian Energy Sector: An overview with a special emphasis on renewable energy, energy efficiency and rural electrification

Key:

NBET – National Bulk Electricity Trading

DISCO – Distribution Company

GENCO – Generating Company

NIPP - National Integrated Power Project

IPP – Independent Power Producer

Privatisation of distribution and generation

As a result of the reform process, the Power Holding Company of Nigeria (PHCN), 100% owned by the Federal government, was unbundled into 18 business units - 7 dealing with generation (GENCOs), 1 transmission and 11 distribution companies (DISCOs). The generation and distribution units then went through a process of privatisation and \$2.5 billion was raised through the sales or concessions. The transmission company was kept under state ownership, but a management contract was entered into with a Canadian company, Manitoba Hydro International Ltd, a wholly-owned subsidiary of Manitoba Hydro which is a Canadian public utility. The aim of Manitoba Hydro is to turn the transmission company into a commercial company “which is technically and financially efficient, stable, and sustainable”, that is market-driven and that can then be privatized.¹²

Most bid winners for the DISCOs and GENCOs 'were oligarchs connected to the political elite, like former military president Abdulsalami Abubakar, former military governor of Kano state Sani Bello and tycoon Emeka Offor, but with some recognised technical partners like Siemens and Manila Electric'. By 2013, the process of privatising the GENCOs and DISCOs had been completed, but there have been many complaints about their inability to deliver sufficient electricity for all (Appendix one identifies the private consortiums that took over the units).

There have also been complaints about Manitoba Hydro's management of the Transmission Company, with reports indicating that the contract, due to end at the end of July 2016, unlikely to be renewed. It was originally a three year contract, ending July 31 2015, but was then renewed for one year. Manitoba Hydro has been criticized by some in government, and more broadly within the community for some of the practises it has been involved in. In January 2016, the Senate of Nigeria passed a motion titled Unwholesome Practices by Manitoba Hydro International Nigeria Limited, which called for the circumstances surrounding the preparation and implementation of the contract to be investigated. A key issue raised by the Senate was concern that Manitoba Hydro was being paid in USA dollars, rather than Nigerian Naira. Other criticisms relate to the salaries paid to the expatriate management team at Manitoba Hydro, Reports have suggested that the government might be planning to return the Transmission Company to government management.¹³

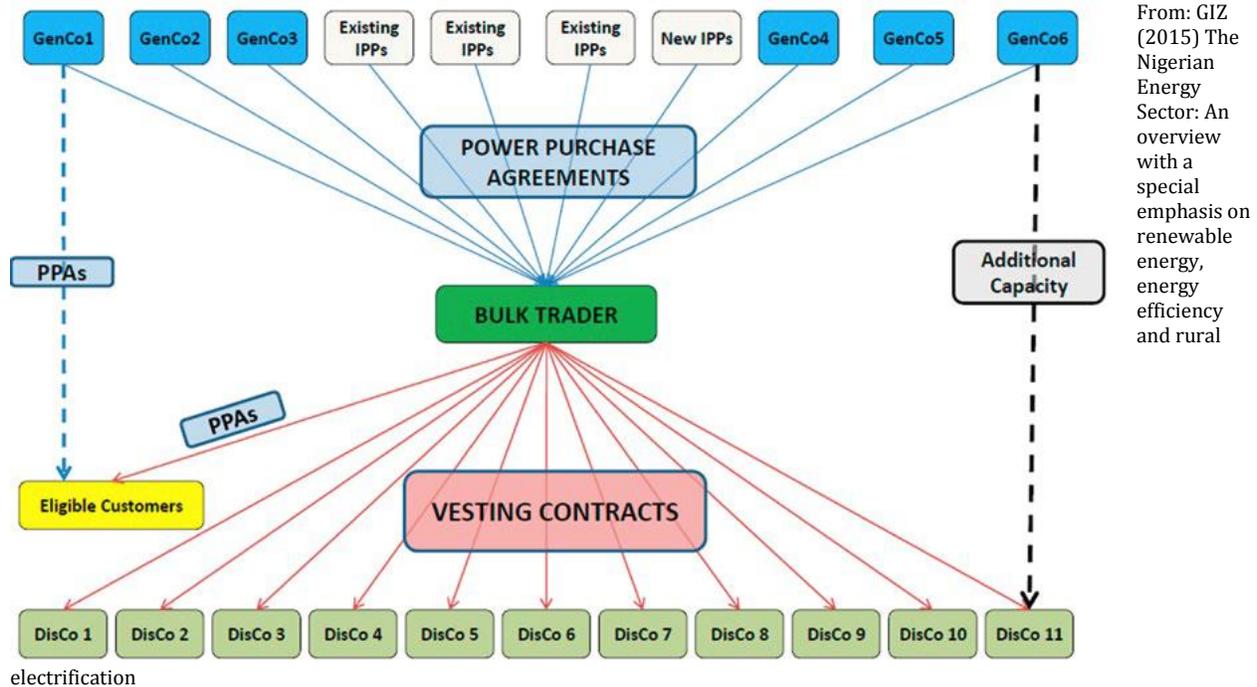
Role of the Nigerian Bulk Electricity Trading (NBET) Plc

As part of the process of privatisation, the Nigerian Bulk Electricity Trading Plc (NBET) was established in 2010. It is government owned - 80% by the Bureau of Public Enterprises (BPE) and 20% by the Ministry of Finance. Its role is to boost the confidence of investors in the electricity market and does this by carrying a great deal of the risk involved. For instance:

- It bears off-take, market and payment default risks
- The risk of gas transportation if Nigerian Gas Company (NGC) is responsible for delivering gas to the generation company
- Transmission risk
- Liquidity/payment risks (by, for instance, covering any payment shortfalls between the generation and distribution companies)
- Any risks associated with change in law, change in tax and expropriation
- Local Political Force Majeure risk

NBET acts as a bulk purchaser of electricity from the Generating companies (GENCOs), and sells it on to the Distribution Companies (DISCOs). The diagram below shows how this process is structured.

Diagram 1: Nigeria Energy industry



From: GIZ (2015) The Nigerian Energy Sector: An overview with a special emphasis on renewable energy, energy efficiency and rural electrification

NBET will continue to guarantee all purchases in the market's transitional period, which is expected to last between 5 – 10 years.¹⁴ In turn, the World Bank provides the Federal Government with partial risk guarantees if NBET is unable to pay a generating company in the lifetime of the interim market.¹⁵

Insufficient investment and supply

Despite their promises, and the guarantees provided, the private sector has not invested sufficiently in the energy sector and generation still falls far behind demand. The result is that many people still do not have access to electricity 24/7, or even any electricity at all.

Nearly three years after privatisation, there is still insufficient electricity supply, with generated output never rising above 5 000 MW, about a third of peak demand. There are frequent outages and continued high use of diesel generators.¹⁶ It is estimated that at the current rate of commissioning plants, supply will struggle to reach 9 500 MW by 2020.¹⁷

Tariffs and billing

Part of the process of reforming the sector was the launch of the Multi-Year Tariff Order (MYTO) tariff model, which was designed to phase in cost-reflective electricity tariffs. This tariff model is an essential part of the shift to an electricity market – the cost-reflective tariffs are a key mechanism to

boost the confidence of investors and attract them into the sector. However, this approach to tariff setting has meant rapid and high tariff increases, which are unaffordable for the majority of communities. The Multi-year Tariff Order (MYTO) 2.1 was approved at the beginning of 2015. In some cases, this resulted in average tariff increases of up to 80%. The tariff has different components, and the component which was the major factor driving up the tariff was the incorporation of huge aggregate technical and collection losses into the tariff.

There was a groundswell of opposition to this increase, and to the fact that it was introduced at a time when electricity generation had dropped to below 3000MW. MYTO 2.1 had to be withdrawn and amended. Specifically, the collection losses were taken out of the tariff, resulting in a tariff drop, in some cases of about 50%.¹⁸

At the beginning of 2016, the fixed charge for all electricity consumers was removed, but at the same time, tariffs were again increased, by 45%. This was the fourth increase since privatisation. This again evoked a massive outcry, with the Deputy Senate President calling the increases “ultra-wicked and unconscionable”.¹⁹ The Nigeria Labour Congress, The Trade Union Congress and civil society organizations went on protests at the beginning of February 2016 against the increase. Tariff increases are introduced at a time when many households do not have meters, and accounts are based on estimated reading, which causes considerable disquiet. There are frequent protests by communities, trade unions and various civil society organisations in different parts of the country against poor service, high costs, blackouts and incorrect metering.²⁰

In July 2016 the Federal High Court in Lagos reversed the increase, declaring it illegal. NERC (the Nigerian Electricity Regulatory Commission) has announced that it will appeal this court decision.²¹

The Nigerian Electricity Regulatory Commission (NERC) released a report on 19 April 2016, which sharply criticised the distribution companies (DISCOs) for not having extended the installation of meters for all electricity users as far or as fast as had been promised. In November 2013, the DISCOs had entered into an agreement with the Bureau of Public Enterprises (BPE) and NERC to install meters for the three million customers who do not have meters.²² Since then only an additional 4.5% of the unmetered electricity users have had meters installed. This is a serious problem for unmetered electricity users, who have to deal with a billing system that relies on estimated readings, with the result that there are frequent complaints of unrealistic and inaccurately high bills. In addition, it was electricity users themselves who had largely financed the metering rollout, rather than the DISCOs. Since 2013, 403,255 meters had been procured but it was customers themselves who financed the installation of 251,531 of these meters, in contrast, to the DISCOs who had only financed the installation of 151 724 meters by March 2016.²³

Gas shortages

One of the consistent problems that the Generating Companies (GENCOs) have faced is that of gas shortages, as well as the outstanding amount that the GENCOs owe the gas companies –often referred to as the legacy debt. The gas shortages can be attributed to the fact that only 14% of domestically produced gas is sold to the local market, with 38% exported as liquefied natural gas, another 24% flared and the remainder re-injected to be used as fuel or processed into other liquids.

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Bank bailout for the GENCOs and DISCOs

One of the rationales for privatization is that it will inject private finance into the energy sector. However, these financial injections failed to materialise in the privatized electricity sector in Nigeria. By 2014 financial flows were close to collapse. As a result, NIAF II helped to put together a bailout package which was made available through the Central Bank of Nigeria. Loans totalling N213 billion (\$1.1 billion) were made to the newly privatised DISCOs and GENCOs who had not been meeting their obligations and were struggling to supply energy on a regular basis. The loans are meant to address “legacy gas debts” and a shortfall in revenue that the GENCOs and DISCOs were experiencing.²⁵ The bailouts were also necessary to help the companies meet debt-service obligations on bank loans of about N500 billion. The huge tariff increases that NERC has attempted to introduce over the last few years were in response to the NERC’s growing awareness that the GENCOs /DISCOs were not going to reach their financial targets. The bailout loan will be paid back over a 10 year period. According to reports, the DISCOs will use their loans to move forward with their metering programmes, as well as to procure more transformers, expanding their networks and giving more rural dwellers access to electricity.²⁶

Renewables

In 2013, the US government also launched a renewable energy initiative called ‘Power Africa’ (PA), which ‘works with African governments and private sector partners to remove barriers that impede sustainable energy development in sub-Saharan Africa and unlock the substantial wind, solar, hydropower, natural gas, biomass, and geothermal resources on the continent’ (USAID 2014). The programme’s goal is to ‘increase electricity access by adding more than 30,000 megawatts of cleaner, more efficient electricity generation capacity and 60 million new home and business connections across sub-Saharan Africa’. The Beyond the Grid sub-initiative aimed at expansion of rural electrification and providing ‘access to small scale and off-grid technology’ is included in PA.

Power Africa is a ‘unique private sector led model’ that ‘draws on the combined expertise and abilities of 12 U.S. Government agencies, the World Bank Group, the African Development Bank, the Government of Sweden, African governments, and private sector partners’. It is based on a “Toolbox” approach that ‘offers a range of resources and tools to advance key projects on the electricity grid, or beyond it’. It is also aimed at ‘drive quick-impact interventions and policy reforms to push for sustainable energy development’ among other things (USAID 2014).

Power Africa record to date:

- 1) More than \$20 billion in commitments from the private sector for new on- and off-grid projects in sub-Saharan Africa.

- 2) Over \$7 billion in financial support, loan guarantees, and technical support from US government – for ‘every dollar the U.S. Government has committed to PA leverages almost three dollars in private sector investment commitments’.
- 3) The African Development Bank, the World Bank Group and the Swedish Government have ‘collectively committed an additional \$9 billion in support of Power Africa’ (USAID 2014).

Like DFID and its support for NIAP, the US government argues that economic growth and development are severely constrained by ‘scarcity of sufficient and reliable electricity’.

Corporate partners of Power Africa in Nigeria include:

- Heirs Holding
- UBA Capital
- General Electric
- Africa Finance Corporation
- Africa Development Bank
- The World Bank
- Standard Chartered Bank
- Symbion Power
- Africa Infrastructure Investment Managers
- Nigeria Solar Capital Partners
- America Capital Energy and Infrastructure

On July 24, 2014, the US and the Nigerian governments signed a Memorandum of Understanding (MOU)²⁷ stipulating commitments of the parties in lieu of the Power Africa programme implementation in Nigeria. The document sums up the privatisation drive of the US party that openly states its main interest as that of securing the interest of the US in Africa and in Nigeria. In the MOU the Nigerian Government expressed its ‘support for Power Africa, a multi-stakeholder partnership’ with US government, the Power Africa Focus Countries, the US and African private sector, and the African Development Bank with additional private and public partners referred to collectively as Power Africa Partners. The aim of collaboration is stipulated as to ‘accelerate investment in sub-Saharan Africa’s power sector over the next 5 years’ with potential revision and extension.

The Roadmap for power sector reform that the Federal Government of Nigeria is committing in the MOU is essentially a plan for wholesale privatisation of the existing infrastructure, sell-off of assets, and removal from potential government participation in the future of the country’s energy generation and distribution. The Roadmap involves fulfilment of the Electric Power Sector Reform Act i.e. ‘removing obstacles to private sector investment, clarifying the government’s strategy on the divestiture of the Power Holding Company of Nigeria (PHCN) successor companies; and reforming the fuel to power sector’ (MOU 2014: 4).

According to the MOU, the Federal Government of Nigeria (FGON) commits to key policy reform of the energy sector that include:

General:

- Non-discriminatory economic reform to promote and lead in ‘rapid, broad-based and inclusive’ economic growth backed by large policy reform
- Allocate resources to remove ‘known and emerging’ constraints through power sector plus ‘removal of barriers to importation of clean energy products related to tax regimes and import duties’.
- Support increase of renewable energy share and access through clean, off-grid solutions via legislative, policy and regulatory reform
- Undertake reforms aimed at promotion of gender equality in activities related to the power sector.

Name	MW	Type of transaction/ Timeline	Value (ISD million)	Power Africa Support	GON actions
Power Holding Company of Nigeria Successor Companies, 10 DISCOs and 5 GENCOs	2121 MW	Short term Capital Expenditure Facility for contractors to the distribution companies Long term Capital Expenditure facility for the distribution companies Q4 2014	\$90 million \$1 billion	* USAID participated in the evaluation of technical bids * Reviewed the Industry Agreements signed by the investors * Credit Enhancement facility to Commercial Banks for Short term Capital Expenditure * Credit Enhancement to unlock Long term capital through Pension and Insurance for Distribution Companies. * Trade Mission for equipment sourcing	* Political will in support of the liberalisation programme * Created an enabling environment to encourage private sector participation * Multi Year Tariff Order review version 2.1 released * produced policy to increase rural access to modern energy * Diversification of primary energy sources
Azura — Edo Energy	450 MW	Green Field Open Cycle Gas to Power Project * Expected Financial Close Q4 2015 * Construction 2015-2018 * Operational 2018	\$1 billion	* USAID provided technical support to the Nigeria Bulk Electricity Trading Company (NBET), which led to the successful negotiation of the Power Purchase Agreement (PPA) and the Put Call Options Agreement (PCOA) for Azura Energy * The capitalization of NBET, a well- structured PPA, the availability of the PCOA and other risk mitigation measures from the World Bank, unlocked lenders investment for the project	* Capitalization of the Bulk Trader * Approval of the Put Call Options Agreement * Approval of the Power Purchase Agreement

JBS Wind Power	100 MW	<p>Green field Wind Power Project</p> <ul style="list-style-type: none"> * Finalize negotiation of PPA Q2 2016 * Commence negotiation of PCOA Q2 2016 * Financial Close Q2 2016 * Construction starts Q3 2016 for completion in 2018 	\$300 million	<ul style="list-style-type: none"> * USAID drafted form PPA and PCOA for Wind Project * USAID providing Technical Assistance to negotiate the PPA and PCOA 	<ul style="list-style-type: none"> * Nominated project to Ministry of Finance for the African Development Bank Partial Risk Guarantee * Approval of PPA when due * Approval of PCOA when due
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Special

1. Implementation of tariff reform. Following establishment of the Multi Year Tariff Order (MYTO) by NERC in 2008, MYTO II was issued in 2012 with a promise of next review for 2017 to 'enhance cost effectiveness' (pp.4-5) i.e. increase tariff for consumers to increase return on investment.
2. Continued liberalisation of the Power Sector as authorised in the Electricity Sector Power Reform Act of 2005 (ESPR).
3. Fulfil the Roadmap for Power Sector Reform, adopted in 2010. Federal Government of Nigeria (FGON) obliged to guarantee transparency and accountability post privatisation of PHCN Successor Companies and NDPHCN plants.
4. Review and update the Renewable Energy Master Plan produced in 2006 which outlines FGON plans to diversify energy resources.
5. Support the newly reconstituted Rural Electrification Agency to implement the Rural Electrification Policy.
6. Review and update the Renewable Energy Feed-in-Tariff. Revision of tariffs to 'reflect the range of circumstances and specific tariff agreements' within the NERC Regulatory Tariff Review Process. What this can potentially mean is cutting of the tariff to make conventional energy competitive as is evidenced by the experience of EU (Yurchenko and Thomas 2015) however the outcome remains to be seen.
7. Reduce gas flaring.
8. Develop strategy and pricing framework for natural gas and gas to power. FGON, Power Africa, and other donors are to 'continue develop a comprehensive strategy to optimize allocation of gas resources and develop a pricing framework for gas power and other uses'.
9. Establish plans and financing strategy for power transmission. FGON commits to 'include support to the Transmission Capacity of Nigeria and adequate financing for the timely transmission capacity to keep pace with power generation...' (p. 6) This will mean public financing to increase the transmission capacity for the private companies to make profit at the end. This completely undermines the benefits of public investment.
10. Establish contract and rule based transitional electricity market. 'The successes recorded through the reform and privatisation of the Power Sector are all conditions precedent for the commencement of the contract- and rule-based Transitional Electricity Market (TEM). The Federal Government will continue to monitor the said conditions to determine the earliest appropriate time to commence the aforesaid Transition to Electricity Market'.

US Government commitments include:

1. Participation in Power Africa via the US Dept. of Commerce and US Foreign Commercial Service to 'promote commercial opportunities for US companies' in a working relationship with Export-Import Bank of the US (EXIM), Overseas Private Investment Corporation (OPIC), and US Trade and Development Agenda (USTDA) funding agencies.
2. The US Government via USAID and the Dept of Commerce (DOC) and Commercial Law Program commit to assist in developing 'standardized, annotated Power Purchase and

other legal agreements' to make negotiations smoother. Such standardisation means preparing ground first and foremost for US companies which also often puts local competitors in a disadvantageous position as they need to adapt their operations which is time-consuming and costly.

3. US Government via EXIM aims to procure \$5 billion for US exports support in 'development of power projects across sub-Saharan Africa'.
4. Via OPIC the US Government commits to spend \$1.5 billion 'in financing and insurance to support energy projects in sub-Saharan Africa'. This will mean financialisation of the projects and effective potential costs to the end consumer.
5. \$258 million over 5 years support via USAID commitment in support of Power Africa in Power Africa Focus Countries.
6. \$20 million 'in project preparation, feasibility and technical assistance grants to develop renewable energy projects' commitment with OPIC and USTDA coordinated via US-Africa Clean Energy Finance Initiative (US-ACEF); supported by US-Africa Clean Energy Development and Finance Centre (CEDFC) in Johannesburg, SA.
7. Support by funding provision for 'analysis of major energy infrastructure investments to achieve successful project financing and implementation; pilot projects... regulatory reform...'
8. Help in resolving 'technical impediments to deployment of power projects and to expedite projects' via reform, analysis, lending expertise, etc.
9. The US Government embassy, USAID, USTDA, Millennium Challenge Corporation (MCC), US Dept. of Energy and other agencies to explore additional resources for contribution to Power Africa.
10. Specific Nigeria Commitment: USAID intends to provide some \$28 million for 'privatisation of Nigeria's electricity sector, reform of the gas sector, and development of renewable electricity generation'.

In 2015, DFID launched 'Energy Africa' (EA), an Africa wide programme to improve access to electricity. The partnership documents were signed with Ethiopia, Ghana, Malawi, Nigeria, Rwanda, Sierra Leone, Somalia and further signatures expected soon with Mozambique, Kenya and Zambia. In addition, DFID signed a new partnership agreement with USAID in December 2015²⁸ which will result in the collaboration of 'Power Africa' with 'Energy Africa', an example of the continued strong influence of both the UK and US in the Nigerian energy sector.

DFID and the UK Department for Energy and Climate Change (DECC) has provided £98m of funding to Green Africa Power (GAP) which is the newest facility of the Private Infrastructure Development Group Trust (PIDG) which offers subordinated debt and contingent lines of credit to privately-owned renewable power generation projects in the most under-developed countries in Africa. GAP invests alongside commercial lenders and other investors in order to stimulate private investment in renewable energy. The projects which are eligible for funding from GAP, will be managed by EISER, a global, independent infrastructure fund manager, and Camco (Clean Energy) have set up a joint team to originate, execute and manage projects eligible for funding by GAP.²⁹ EISER invests in infrastructure assets in the energy (including renewables), transport and environmental sectors and manages €3.5 billion assets globally, through fund and co-investment structures.³⁰

Another renewable energy initiative is the 'Lighting Africa' programme, which is a 'joint initiative of the International Finance Corporation (IFC) and the World Bank. It will help

increase access to affordable, clean and safer lighting for more than 30 percent of Nigeria's population who live in rural areas, and have low incomes and no access to grid electricity'.³¹ The programme focuses purely on private sector participation in electrification reform and the expansion of the sector. However, the Renewable Energy Systems (RES) focus makes it potentially more accessible than the Power Africa initiatives. According to their programme manager:

'Lighting Africa is helping to build a market to bring off-grid lighting and energy services across Africa by establishing quality standards, investing in consumer education, creating a favourable investment climate, and supporting innovative business models. As we foster these partnerships among all parties in the industry, various opportunities would be explored and our goal of inclusive electrification would be achieved in Nigeria'.³²

Yet again, the private sector is in control of the programme in a country with very high unemployment and poverty rates. It remains unclear how consumer financing of the supply is expected to work.

Conclusion

The energy transmission network in Nigeria is still publicly owned but lacks investment. If and when the grid is restructured via World Bank and US 'Power Africa' programmes, it will be done via private firms and so the potential for public control of the asset will be lost. High unemployment and workers' unrest have resulted in socio-economic destabilisation and this has led Nigeria's government to agree to 'pay off more than 14,000 workers at PHCN with a total of 384 billion naira (\$2.4 billion) which is nearly all of the money it received from privatisation of the plants'.³³ The energy sector is in crisis. The Nigerian government recently had to attract \$750 million for transmission improvement via Eurobonds and is planning to sell off more assets. A €1.3 billion power plant has been funded with Chinese capital.³⁴

It is unclear how the energy reforms will benefit the consumer. In a country rich in natural energy resources, an energy mix which relies to a much greater extent on renewable energy within a publicly owned sector and which allows for both centralised and decentralised generation and distribution, would be more appropriate in meeting social needs as well as the broader needs of the economy. Instead, Nigeria's energy sector transformation is using a commercialisation-privatisation set of reforms, which although presented as an inclusive model through its use of a multi-stakeholder approach, its push for sustainable energy sources and the promotion of gender equality, is full of contradictions that will make achieving these goals difficult. Most of those stem from the market-based logic and high level of private sector participation which will institutionalise the financing of infrastructure development from the state budget and will mean that energy decisions are ultimately driven by profit maximising decisions. There is an increasing emphasis on the use of renewable energy sources but it is not clear how this will be achieved, for instance, by which private providers, or how it will be financed.

The Public Services International Research Unit (PSIRU) investigates the impact of privatisation and liberalisation on public services, with a specific focus on water, energy, waste management, health and social care sectors. Other research topics include the function and structure of public services, the strategies of multinational companies and influence of international finance institutions on public services. PSIRU is based in the Business Faculty, University of Greenwich, London, UK. Researchers: Prof. Steve Thomas, Dr. Jane Lethbridge (Director), Dr. Emanuele Lobina, Prof. David Hall, Dr. Pauline McGovern, Dr. Jeff Powell, Dr. Mary Robertson, Sandra Van Niekerk, Dr. Yuliya Yurchenko

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Appendix one

Table 1 shows the successful companies for the generation companies (Gencos).

Power plant	% sold	Consortium	Companies/individuals involved
Geregu Power Plc (thermal)	Selling 51%	Amperion Power Distribution Limited	BSG Resource Limited (Israel) State Grid Corporation of China (China) Forte Oil Plc (Nigeria)
Sapele Power Plc (thermal)	Selling 100%	Chinese Nigeria Power Consortium CMEC/Eurafric Energy Ltd	China Machinery Engineering Corporation (CMEC) Eurafric Energy (Nigeria)

Ughelli Power Plc (thermal)	Selling 100%	Transcorp	Symbion Power (USA); Transnational Company of Nigeria (Nigeria) Wood Rock Medea Thomasen PSL
Shiroro Power Plc (hydro)	Concession for 15 years	North-South Power	XS Energy Ltd BP Investment Ltd Urban Shelter Ltd Transatlantic Development and Investment Co. China International Water Electric China Three Gorges Corporation Niger state government Roads Nigeria Plc
Kainji Power Plc (hydro) (bundled with Jebba hydro power plant)	Concession for 15 years	Mainstream Energy Solutions Limited	RusHydro International RusHydro JSC (Russia) Amni International Petroleum Development C Ltd NIGLEC Aqua Energy Confluence Cable Network Ltd TAK Anchorage Holdings, Nigeria
Afam power plant		No company qualified	

Table 2 shows the successful companies for the distribution companies (Discos)

Distribution company	Consortium	Companies/individuals involved
Eko Distribution Company	West Power and Gas Limited	
Ikeja	Korea Electric Power Corporation (KEPCO)/New Electricity Distribution Company (NEDC) Consortium	Partnered by local energy firm: Sahara Energy
Ibadan	Integrated Energy Distribution and Retail Marketing Ltd	Partnered by the Phillipines largest power retailed Manila Electric
Yola	Integrated Energy Distribution and Retail Marketing Ltd	
Abuja Distribution Company	Kann Consortium Utility Company Ltd	•
Enugu Distribution Company	Interstate Consortium	<ul style="list-style-type: none"> • Chrome Power (Emeka Offor) • Power House International Ltd • Metropolitan Electricity Authority, MEA , of Thailand
Benin Distribution company	Viego Power Consortium (Indian based)	<ul style="list-style-type: none"> • Vigeo Holdings Limited • Global Utilities Management Company Limited (GUMCO) (Nigeria) • African Finance Corporation (AFC) (private equity firm) <p>Technical partners include:</p> <ul style="list-style-type: none"> • North Delhi Power Limited – a subsidiary of Tata Power Distribution Limited (TPDDL) – Indian based • Calcutta Electric Supply Corporation Limited (CESC) • GUMCO
Port-Harcourt distribution company	4Power Consortium	
Kano	Sahelian Power SPV Ltd	<ul style="list-style-type: none"> • Incar Power Limited • IPL (promoted by Alhaji Umaru Muttalab) • Dantata Investment and Securities Limited (promoted by Alhaji Aminu Dantata) • Sahelian Energy and Integrated Services Limited (SEIS) • Highland Electricity Limited (HEL) • Kayseri Ve Civari Elektrik T.A.S. (KCETAS) (Turkish company)
Jos Distribution Company	Aura Energy	
Kaduna Disco		

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- ² <http://www.ft.com/intl/cms/s/0/01484840-78b5-11e5-933d-efcdc3c11c89.html#axzz460ofB20U>
- ³ <http://www.globaljustice.org.uk/blog/2015/jul/24/%E2%80%98it%E2%80%99s-story-corruption-greed-and-ineptitude%E2%80%99-uk-aid-and-nigerias-energy>
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- ⁹ DFID (2015) [Annual Review of NIAF, 2014-15](#)
- ¹⁰ iati.dfid.gov.uk/iati_documents
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²⁶ Premium Times (2016) Electricity Distribution Companies – The Challenges and Way Forward, By Odion Omonfoman <http://blogs.premiumtimesng.com/2016/01/04/electricity-distribution-companies-the-challenges-and-way-forward-by-odion-omonfoman/>

²⁷ The Memorandum of Understanding (MOU) 'is jointly signed by the Federal Government of Nigeria (FGON), acting through its Federal Ministry of Power (FMOP), and the Government of the United States of America ("USG"), acting through the Office of the Coordinator of Power Africa and Trade Africa and the United States Ambassador in Nigeria (collectively, the Participants). U.S. President Barack Obama launched the Power Africa initiative (Power Africa) on June 30, 2013, during his visit to Africa. Power Africa draws on the tools of multiple USG agencies, including the U.S. Agency for International Development (USAID), the Department of State (State), the Overseas Private Investment Corporation (OPIC), the Export Import Bank of the United State (EXIM), the U.S. Trade Development Agency (USTDA), the Millennium Challenge Corporation (MCC), the Department of Treasury (DOT), the Department of Commerce (DOC), the Department of Energy (DOE), and the U.S. African Development Foundation (USADF), to partner with the private and public sectors to increase significantly the amount of electricity available in sub-Saharan Africa' (USIAD 2014; available at: <https://www.usaid.gov/documents/1860/power-africa-mou-nigeria>).

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²⁹ CamCo Clean Energy (2016) Financing renewable projects <http://www.camcocleanenergy.com/africa/financing-renewable-projects>

³⁰ <http://www.eiserinfrastructure.com>

³¹ IFC (2012) Africa The Power of the Private Sector 6(4) <http://www.ifc.org/wps/wcm/connect/832f31004b1f9746a7a6ef08d0338960/TOSAfrica.pdf?MOD=AJPERES>

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