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Developing power projects in Nigeria

03 June 2016 | by Adeola Sunmola and Nicholas Okafor

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Adeola Sunmola and Nicholas Okafor of Udo Udoma & Belo-Osagie discuss the reform of Nigeria's power sector, highlighting the key regulatory developments and where there are opportunities for investors, and outlining the challenges the sector still faces

Nigeria, Africa's largest economy, has a population of approximately 180 million people and is, as of today, being served with on-grid electricity totalling only around 6000MW. Nigeria's electricity market has the potential to absorb significant investments and provide rewarding returns on those investments. There remains a substantial electricity generation shortage and, with the privatisation of the Nigerian power sector, the need for immense investment in generation and distribution has become urgent.

The message from policy makers is that the additional generation capacity and the distribution infrastructure upgrade which the Nigerian power sector requires to accelerate the country's infrastructure development must come from the private sector. There are several projects at various stages of development that could increase the installed capacity to 15,000MW by 2020. The government's target, though, is to ensure that Nigeria has a generation capacity of 40,000MW by 2020. There is a high demand for electricity in Nigeria and several studies have confirmed the willingness and ability of consumers to pay higher tariffs if constant power is provided. Bridging the gap between demand for power and available supply is where IPPs (independent power producers) and private sector investment come in.

The electricity industry in Nigeria is formally referred to as NESI (Nigerian Electricity Supply Industry) and has structures in place that will encourage bankable power projects in the country. Given the present state of the NESI, this article will discuss the ways by which power projects in the electricity market in Nigeria may be structured; the requirements for banks and private investors to finance such projects; and how bankable power projects – whether in the generation or distribution space – could be successfully executed.

Regulatory framework

NESI is regulated by an industry wide legislation, the Electric Power Sector Reform Act, No. 5 of 2005 (EPSRA or the Act). The Act defines the structure of the electricity market and grants authority to the independent regulator created by the Act to make regulations for NESI.

As indicated in its long title, one of the aims of the Act is to provide the legal framework for the reform of the power sector, including the privatisation of the sector that was concluded in 2013, and the regulation and licensing of IPPs and other entities undertaking electricity generation, distribution, trading and transmission. The regulatory body established by the Act is the Nigerian Electricity Regulatory Commission (NERC) which is conferred with the power to make regulations relating to all activities in the NESI, including the power to issue licences, regulate competition and abuse of market power and issue and regulate tariff, among others.

Permitting/licensing regime

The Act permits NERC to issue licenses for an aggregate period of 15 years, and renewal is also permitted. It has been suggested that the licence regime should be modified so that it matches the tenor of power purchase agreements (PPAs) which is typically 20 years. NERC has repeatedly assured the Nigerian power investment community that licenses will be renewed at the expiration of the existing term subject to a licensee complying with the terms and conditions of its current licence.

Project sponsors In order to secure financing from reputable financial institutions, consideration is given to the reputation and financial strength of the project sponsors. Current projects being developed in the Nigerian power sector are backed by investors that have international power project experience and proven track records of developing power projects in Nigeria and elsewhere.

In a number of cases, these sponsors are executing first-of-a-kind power projects and, therefore, success is vital to them. An example of such sponsors is Geometric Power Limited, which together with its subsidiaries, is developing a number of greenfield IPPs, one of which is structured as a ring-fenced model utility that will generate and distribute the power within a ring-fenced location with millions of residents and numerous industrial clusters. Azura Edo West Africa Limited is also developing a 500MW gas-fired, project financed IPP in Edo State, while Zuma Energy Nigeria Limited is developing a 1200MW coal-fired power plant in Itobe, Kogi State. The credibility of the project sponsors for these projects played a major role in attracting the requisite capital, both debt and equity, for these projects.

Availability of gas and other fuel sources

With proven reserves of 187TCF and unproven reserves of approximately 600TCF, Nigeria's gas potential is enormous. That said, one of the primary challenges facing gas-fired thermal power plants, which constitute more than 70% of generation capacity in Nigeria, is unavailability of gas. This impediment is attributed to poor gas infrastructure and an uncompetitive domestic gas market.

For gas-fired thermal power plants, the Federal Government of Nigeria (FGN) addressed the lack of investment in the gas sector by releasing, in 2011, the national gas masterplan, which contained a framework for private sector investment in gas infrastructure. In addition, the FGN, in 2014, increased the domestic gas price from \$1 to \$2.50 per MMBTU with an additional \$0.80 for gas transportation, making a total recoverable cost of \$3.30 per MMBTU. The FGN also maintained the domestic supply obligations for international oil companies (IOCs) by requiring all IOCs to dedicate a minimum percentage of their gas production to domestic use.

In March 2015, the regulator of the petroleum industry, the Department of Petroleum Resources, along with the Nigerian National Petroleum Corporation announced that it will introduce the Nigerian Gas Transportation Network Code (NGTNC) which provides the contractual framework between gas transporters and network users with regulated terms for open access to the gas pipeline network. The NGTNC also provides a uniform platform in terms of guidelines for agreements between buyers and sellers aimed at ensuring transparency and eliminating existing bottlenecks.

A number of completed projects as well as those in the development stage have executed or are negotiating long term gas purchase and supply agreements with a 10 to 20 year tenor, tailored to match the term of the relevant PPA. In addition, gas supply and transportation costs are made pass through to the power off-taker, in the tariff code.

For other energy sources, such as renewables, the NERC issued the Renewable Energy Feed-In Tariff 2015 (REFIT), a fast-track code that was designed to encourage a massive roll out of small scale renewable projects with a target that power from such renewable sources will deliver a maximum of 1000MW to the grid by 2018 and 2000MW by 2020. The REFIT was approved as a result of the FGN's goal of fast tracking the deepening of the energy mix in the

country given its profound reliance on gas-fired power plants and a few large hydro power stations. NERC was given the mandate to develop a bankable tariff regime and create a policy that will support the development of small scale renewable electricity, connected to the grid or directly to distribution companies (Discos), which will attract private sector investment in renewables. The REFIT is, however, not meant to apply to large scale renewable projects but is intended to act as the catalyst for a renewable energy company that wishes to invest in the Nigerian power sector.

Liquidity of electricity off-taker

The off-taker of electricity generated by IPPs in Nigeria is the Nigerian Bulk Electricity Trading Plc (NBET), a public limited liability company wholly owned by the FGN, which undertakes the bulk purchase of electric power from generation companies (Gencos) for onward sale to Discos. While IPPs are also permitted to execute PPAs directly with the Discos, such arrangements are limited in scope at the moment because most of the Discos are not credit worthy, and the IPPs are unwilling to take their credit risk.

The current mechanism under which NBET operates is to enter into long term, 20 year PPAs. This system is known and described as the bulk PPA regime as NBET is conferred with a bulk purchase and resale licence pursuant to the Act. The PPA is based on a tariff order promulgated by the NERC and recognises inflation and fluctuation in foreign exchange rate as factors that could trigger adjustments in the tariff. The PPA typically aims to achieve an equitable allocation of risk among the contracting parties and covers risks related to force majeure events, change in law, change in tax as well as political, construction and operational risks.

NBET can purchase any amount of power generated in the country, provided such power can be synchronised to the grid at 132KV/330KV Lines. To this end, NBET enters into 20 year PPAs with generation companies in which it undertakes to purchase all energy produced by them. NBET's ability to fund these commitments is backed by a \$350 million eurobond funding, the \$325 million escrow proceeds from the sale of the Egbin Power Plant, yearly capital supplementation of approximately \$145 million from the FGN and approximately \$150 million monthly receivables from the sale of power to Discos. The strength of the funding from these sources affects the PPA arrangement positively, as it provides the much needed assurance to investors in the generation segment of the power sector that they will be paid for the electricity they generate. To strengthen the NBET's creditworthiness, current PPAs also require that the NBET provide some form of payment security to guarantee the payment of capacity and energy delivered to it.

As a result of the significant aggregate technical, commercial and collection (ATC&C) losses in the Nigerian power sector, accentuated by collection losses by the Discos, there is a general sector-wide revenue gap that needs to be plugged in order to ensure that payments are made, in full, to all NESI market participants. In 2015, the Central Bank of Nigeria (CBN) intervened by providing approximately \$1.8 billion to the sector via the CBN Nigerian Electricity Market Stabilisation Facility (NEMSF). The NEMSF has, however, not yet been fully disbursed. The FGN recently proposed the issuance of an infrastructure bond of up to N309 billion (approximately \$1.6 billion). The market wide liquidity arising from poor collections by the Discos and the huge historical debt left behind by the former national monopoly, PHCN, is one key risk affecting payments in the NESI which must be tackled urgently.

Credit enhancement

Credit enhancement products, including bank guarantees, partial risk guarantees, partial risk insurance and letters of credit are available in the Nigerian market in various forms. The NBET typically undertakes in the PPAs with IPPs to provide payment security by way of a standby letter of credit or a demand guarantee governed by internationally acclaimed rules for demand guarantees and issued by a commercial bank that meets specified criteria. The guarantee or letter of credit is security for NBET's obligation to make capacity, energy, gas and other payments in accordance with the PPA.

The World Bank Group and the African Development Bank also have partial risk guarantee products designed to guarantee payment for power delivered to NBET, and these are being made available to investors. The World Bank, the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) launched the Power Sector Guarantees Project (PSGP) in Nigeria in order to address the sector deficiencies, and encourage investment by IPPs. The PSGP is a package of loans and guarantees supporting a series of energy projects. The World Bank Partial Risk Guarantees (PRG) that have been approved include up to \$245million for the 459MW Azura-Edo Power Plant near Benin City, Edo State; and up to \$150million for the 533MW Qua Iboe plant in Ibeno, Akwa Ibom State. The boards of the IFC and the MIGA approved loans and hedging instruments of up to \$135 million and guarantees of up to \$659 million for the Azura-Edo project.

A number of other greenfield projects have also been nominated by the World Bank and are being reviewed with the aim of benefiting from the programme.

Put and call option agreements

The Nigerian Government does not issue direct guarantees to IPPs but the PRG regime of the multilateral agencies has been structured on the basis that the FGN will provide an indemnity to the multilateral institutions. In addition, the FGN provides support to the IPPs by guaranteeing payment of termination payments and a repurchase of the power plant if the PPA is terminated before the expiration of its 20 year term.

In the Nigerian market today, after executing a PPA, the IPP typically negotiates and executes a put and call option agreement (PCOA) with the Federal Ministry of Finance or any other agency of the FGN which transfers the payment risk from NBET directly to the FGN. A put option allows the holder of the option, usually the IPP, to compel the government, upon the occurrence of certain events, to purchase a power plant at a pre-determined price. A call option, on the other hand, permits the holder of the option, usually the government entity, to compel the seller, upon the occurrence of certain events, to sell the power project at a pre-determined price. The quantum of termination payments that will be received by an IPP under the PCOA will depend on whether the termination of the PPA was the result of a seller default, a buyer default or a force majeure event.

One risk that is covered in the PCOA, regardless of the cause of the termination of the PPA, is that debt outstanding to the banks will be paid in full even though the equity investment may either be recovered in full or impaired depending on the cause of the termination.

The Azura-Edo IPP is a beneficiary of the PCOA regime, which has now been widely accepted in the power sector. Other PCOAs are being negotiated in connection with the power plants constructed under the National Integrated Power Project as well as other greenfield projects.

Tariff

An area of primary concern for a project company and lenders will be the adequacy of the provisions in the PPA for the calculation and payment of tariff. A key factor to developing a bankable power project in Nigeria is the cost-reflective nature of the tariff. The Act requires the NERC, as a matter of law, to issue a tariff that is 'cost-reflective'. The tariff order issued by the NERC is referred to as the multi-year tariff order (MYTO), the first of which was MYTO 1 issued in 2008, with some embedded subsidies.

It became apparent to industry participants that MYTO 1 did not sufficiently address changes in inflation, exchange rate and gas prices and, therefore, NERC issued another tariff order called MYTO2 in 2012. While the key principles of cost reflectivity and affordability were taken into consideration in establishing MYTO 2, at the time of its issuance, the

power sector privatisation had not been completed and the Discos had not undertaken the baseline study required to benchmark the actual ATC&C loss in the system.

Upon completion of the baseline study in 2014, it became necessary to review the tariff to take account of the actual ATC & C losses in the system. The NERC reviewed MYTO 2 by issuing MYTO 2.1, the tariff order for the Period spanning January 1, 2015 to December 31, 2018. The review in electricity tariff generated a major outcry from the public, as is typical with consumers. Without consultation with stakeholders, the NERC issued an amendment to MYTO 2.1 which removed collection loss, a key component of the pricing of ATC&C loss, from the tariff, prompting almost all the Discos in the country to issue force majeure notices to the FGN with a view to terminating certain contracts executed during the privatisation of the sector.

In order to address the foregoing issues and to address consumers' complaints on payment of fixed charges, in 2015, the NERC issued the amended tariff, MYTO 2015, which became effective on February 1, 2016. The introduction of this tariff continues to generate significant outcry from the public but the FGN is unwavering in its support for the new tariff. A few consumer groups instituted an action in court to challenge the introduction of MYTO 2015 and the Nigerian Senate has also directed the NERC to reverse the implementation of MYTO 2015 until the conclusion of its investigation to confirm that the MYTO was introduced in accordance with the provisions of the Act.

The Senate's directive prompted all the legacy Gencos in Nigeria to sue the NERC, the Nigerian Senate and the Attorney General, seeking declaratory and injunctive reliefs aimed at preventing a reversal of the tariff. The NERC has given an undertaking to the court that it will neither review the tariff nor take any further steps while it awaits the outcome of the litigation by the Gencos.

Transmission system

The Transmission Company of Nigeria (TCN), wholly owned by the FGN, is the transmission services provider and performs the trilogy of system operation, market operation (including billing) and ownership and maintenance of the transmission infrastructure.

The reliability of the transmission system is another major factor affecting the Nigerian power sector. The power being generated (around 6000MW) is far greater than what the present transmission infrastructure can accommodate. Obsolete substation equipment, inadequate infrastructure and high technical and non-technical losses as well as the service provider's inability to effectively evacuate power generated by the Gencos are some of the challenges faced by the TCN.

Acknowledging the need to upgrade the transmission network, the FGN declared in January 2014, that it had raised the sum of \$1.5billion for the upgrade of the network, which commenced in 2014. This upgrade is expected to develop a transmission grid that can efficiently evacuate all the power generated (ongoing projects are aimed at increasing the network's evacuation capacity to 15000MW in the first instance), increase reliability to at least 99.9% through the creation of adequate network redundancies, and reduce transmission losses to less than 5%, among others. The Minister of Power recently confirmed that the FGN will fast track the completion of 47 different projects targeted at expanding the grid capacity. More importantly, the FGN is currently considering the decentralisation of the transmission network in a manner that will enable private investors to invest in and manage certain segments of the transmission infrastructure on the basis of an agreed commercial framework.

In terms of risk allocation, an immediate measure adopted to address the unreliability of the transmission system was to make constraints in the transmission network 'an availability event' in the PPAs signed with Gencos. This means that when the inability of a Genco to evacuate power is caused by constraints in the transmission network, the Genco will be entitled to receive its capacity payment even if it does not supply power.

Transitional electricity market

The power sector in Nigeria has entered what NERC designated as the transitional electricity market (TEM), which, based on NERC regulations, is the period when all contracts in the NESI will be activated and the relationship between market participants will rely solely on such contracts. It is hoped that with the structures presently in place the proclamation of TEM by the regulator; the risk mitigation and credit enhancement instruments currently available in the NESI; together with existing legislation that creates an independent regulator; bankable power projects will continue to be developed in Nigeria.

Nicholas Okafor

Partner

Udo Udoma & Belo-Osagie

Nicholas Okafor is a partner in the firm's power, projects and project finance teams. Commended for corporate and finance work, his extensive experience cuts across the firm's banking and finance, labour and employment, and corporate practice areas, where he has been a key member of the teams in various high profile and innovative transactions, including advising on securitisation, international capital market issuances and infrastructure projects.

He advises a diverse range of local and international clients on projects relating to the acquisition and refurbishment of brownfield power plants, the construction and establishment of greenfield projects, including pipelines and power plants, toll roads, and the development of marginal fields and the construction of central gas processing facilities.

Adeola Sunmola

Managing associate

Udo Udoma & Belo-Osagie

Adeola Sunmola is a managing associate in the firm's power, projects and project finance teams. She specialises in syndicated lending transactions, debt and corporate restructuring, project finance and anticorruption compliance. She has advised various lending syndicates on Nigerian projects including power, steel and cement plants.

Adeola participated in workshops on the annotation of power purchase agreements for Power Africa. She contributes to the World Bank's annual Doing Business in Nigeria survey, and has delivered presentations on secured credit transactions and compliance with Nigerian laws and regulations on anti-corruption.

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