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Creating liquidity in Nigeria's power sector and making it more bankable

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Nicholas Okafor, Adeola Sunmola, Busayo Balogun Agosto and Franklin Onwuzu of Udo Udoma & Belo-Osagie in Nigeria analyse and propose solutions for the challenges facing the country's power sector.

Nigeria's electricity supply industry (NESI) was privatised in 2013, pursuant to the Electric Power Sector Reform Act, 2005 (EPSRA). While the privatisation programme has brought about certain benefits, the sector is still bedevilled with many challenges, the most significant of which is the severe lack of liquidity. The power sector's illiquidity has significantly affected progress in the value chain and impacted on the risk appetite of investors that may wish to invest in various facets of the value chain.

This article will, therefore, consider the core causes of the liquidity challenges in the NESI and proffer solutions, which we believe, if implemented by the various stakeholders, will assist in resolving what has been described as the power sector's most critical challenge.

Nigeria's power sector value chain

Electricity generated by the generation companies (gencos) flows in one direction from the gencos down the value chain, while the revenue required to pay all the market participants flows in the opposite direction. This revenue is derived from the payment (tariff) made by the consumers to the distribution companies (discos) as consideration for the electricity supplied by the discos.

At the beginning of the value chain for thermal power plants, therefore, are the fuel suppliers that provide fuel (gas) to the gencos for the production of electricity. Following production of electricity by the gencos, this electricity is, contractually, sold to the Nigerian Bulk Electricity Trading Company (NBET), the central offtaker for electricity connected to the grid, which in turn, sells the power purchased from the gencos to the discos. The electricity from the gencos is wheeled through the Transmission Company of Nigeria (TCN) directly to the discos before the discos then sell the electricity to the final consumers at a tariff prescribed by the sector regulator - the Nigerian Electricity Regulatory Commission (NERC). Gencos are permitted, under applicable law, to sell electricity directly to a class of customers referred to in the EPSRA as 'eligible customers', which are a group of large consumers of electricity that the gencos can negotiate power purchase agreements directly with outside the regulated tariff model. In May 2017, the Minister of Power declared an 'eligible customer regime' by directing the NERC to permit four categories of eligible customers to buy electricity from licensees other than discos. This development, which facilitates direct supply of power from gencos to customers, continues to generate discussion in the power sector.

The tariffs collected by the discos, from the consumers, provide liquidity for the entire value chain, and the funding required to settle costs associated with the generation and transmission of electricity as well as fuel transportation expenses. After the electricity is generated and consumed, the consumers pay the discos, the discos pay the NBET and TCN, NBET pays the gencos and the gencos in turn, pay Load distribution in Nigeria Abuja 11.38 Benin 8.53 Eko 9.22 Enugu 9.36 Ibadan 10.91 Ikeja 11.60 Jos 4.21 Kaduna 8.67 Kano 7.54 Port Harcourt 6.78 Yola 3.09 the fuel suppliers. The effect of the foregoing, therefore, is that a disco's revenue shortfall and consequential liquidity challenge, affects the profitability of the entire value chain.

Causes of illiquidity in the NESI

The liquidity challenge is essentially caused by the revenue shortfall in the NESI, which is affecting the settlement of invoices submitted by market participants, thereby making the debt in the NESI increase on a daily and monthly basis. The illiquidity is caused by several factors, including



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accumulated debt arising from unpaid invoices; poor collection by the discos; substantial technical and commercial losses that has resulted in very high aggregate technical, commercial and collections Loss (ATC&C loss) in the NESI; the legacy debt owed to the value-chain participants, by the defunct integrated national utility, the Power Holding Company of Nigeria (PHCN) and exacerbated by the introduction of the Rules for the Interim Period between Completion of Privatisation and the Start of the Transitional Electricity Market, 2013 (Interim Market Rules) in the NESI.

Set out below are further details on the combination of factors, which are responsible for the current liquidity challenges in the Nigerian power sector.

ATC&C Loss

The ATC&C loss is the difference between the amount of electricity received by a disco from the TCN and the amount of electricity for which it invoices its customers, arising from a combination of technical, commercial and collection factors such as obsolete transmission and distribution infrastructure, inaccurate customer database, inadequate metering, internal collusion, electricity theft, wrong tariff classification of customers, unmetered customers and unaccounted electricity, poor billing data, revenue collection inefficiencies and refusal of consumers to pay, etc. It has been estimated, that up to 46% of electricity is lost in NESI and this has prevented the discos from upgrading basic infrastructure, including metering systems, for effective and profitable take-off. This has in turn, affected the ability of discos to collect their bills efficiently for electricity supplied to customers and ultimately affected revenue cash flow.

Legacy gas debts

The Nigerian Electricity Liability Management Company (NELMCO) was established to enable the government to inherit and be responsible for settling the legacy debts, which accrued as a result of unsettled invoices and payments due to gas suppliers that had been supplying gas to the defunct PHCN. Given that NELMCO has remained largely unfunded and was unable to perform the functions for which it was established, the electricity market participants inherited and assumed the responsibility for satisfying these legacy debts, which ought to have been settled by the government.

Interim Market Rules

The legacy gas debt was exacerbated by the suspension of the application of the contracts, including power purchase agreements by the sector regulator, NERC, through the introduction of the Interim Market Rules, which applied between the last quarter of 2013 and January 31, 2015, as well as the regulator's failure to publish a cost reflective tariff. The Interim Market Rules prescribed that gencos and discos could only be paid a fraction of the revenue due to them, while the balance will be recognised as receivables and debts owed to them in their books. Thus, only 45% to 60% of invoices were paid.

Lack of cost-reflective tariff

The current electricity tariff (i.e. the multi-year tariff order 2015 (MYTO 2015), which became effective on February 1, 2016, is not cost-reflective, as guaranteed under the EPSRA. As indicated in the tariff assumption statistics, the difference between the projected and assumed inputs (inflation, available generation capacity, foreign exchange rate fluctuation, etc), and the actual figures of each of those inputs is quite substantial. The MYTO methodology sets electricity tariff based on certain key assumptions and variables (which are required to be reviewed every six months by the NERC), including:

- Inflation rate;
- Exchange rate fluctuations;
- Increase in the price of natural gas; and,
- Capital expenditure requirements for the entire electricity sector.

Unfortunately, the current electricity tariff has not, in a timely manner, taken into account current changes in the macroeconomic indices listed above. The assumptions on which the current electricity tariff was based have changed; for example, the assumption of an exchange rate of the naira to the US dollar (USD) calculated at the official Central Bank of Nigeria (CBN) exchange rate plus a 1% premium, is no longer the same. Currently, the cost of generating 1kw/h of electricity is between N50 and N70 for consumers, while the actual average price paid by consumers for 1kw/h of electricity is about N35.00. The effect of the foregoing is that the gencos and discos operate at a loss on a daily basis, and this is further exacerbated by the foreign exchange issues discussed below.

Crisis in Nigeria's foreign exchange market

Following the devaluation of the naira, the liquidity challenge has further affected the ability of the discos and gencos to meet their debt service obligations, and implement the necessary infrastructure upgrades required to improve efficiency. A lot of the sector costs including the price of gas, equipment components, operation and maintenance services are denominated in USD. In addition to the foregoing, the investors obtained USD denominated financing when they invested in the gencos and discos during the privatisation programme. In contrast, the revenues accruing to the sector through tariff payments are in naira. The implication of this, is that the wider the gap in the exchange rate between the naira and the USD, the greater the increase in the amount in volumes of naira that would

be required to satisfy the USD obligations in the sector. When the sector privatisation was concluded, in 2013, the acquisition finance documents were negotiated on the basis of an exchange rate of N197 to \$1. Currently, the interbank exchange rate hovers around N322.93 to \$1.

In addition, the scarcity of foreign exchange in the Nigerian foreign exchange market increases the difficulty of sector participants obtaining foreign exchange to meet their debt service and contractual obligations.

Having said the foregoing, however, the expectation is that the Naira's value will significantly improve as a result of the recent regulatory changes including the introduction of the Nigerian Autonomous Foreign Exchange Rate Fixing window by the CBN.

Shortage of gas supply

Nigeria's power sector relies heavily on gas fired power plants, which contribute over 80% of the country's present available capacity on the grid. Due to shortage in the generation of electrical energy from the gencos as a result of lack of gas, discos are not receiving enough power to distribute to consumers. As a result, discos are only in a position to remit to NBET, about 30% to 40% of their cash collections for settlement of obligations in the power sector value chain while they retain the rest for capital and operational expenditure.

Bankable solutions to the liquidity challenge

The first solution (option one) will involve massive intervention in the sector by the Federal Government of Nigeria (FGN) through a series of funding programmes and having a value up to \$10 billion. The second solution (option two) involves a private sector driven agenda, propelled by clear, predictable and steady regulatory guidelines which guarantees against sudden changes in published guidelines. Option two is estimated to cost about \$3 billion of, mostly, private capital. The key apprehension associated with implementing option one is that the FGN may be seen as providing funds to the sector without undertaking a complete restructuring of the sector through the publication of sensible regulations, and the cancellation of unhelpful published regulation (such as the regulation relating to compliance with local content requirements in the electricity sector). We believe therefore, that a modified simultaneous implementation of options one and two will yield optimal results.

Option one

Under this option, we recommend an increased budgetary allocation of funds to NBET to fund its operations and ensure settlement of invoices issued by gencos, and also, a targeted subsidy based on a fund that the FGN will establish, under the management of a private sector asset management company. The fund will have clear criteria on the basis of which investors could benefit from it up to a maximum amount in every billing cycle, and should have a life span of not more than five to seven years. With regard to the funding of NBET, the recent approval by the Federal Executive Council of a N701 billion payment assurance guarantee for NBET through the CBN for the purpose of guaranteeing payment of all invoices issued by gencos within a 12 month period is commendable. In addition, we recommend that the FGN can through the CBN or the Federal Ministry of Finance issue sovereign debt notes (SDN) to cover all the existing debts in the sector with supporting documentation on how to amortise collection of the debts represented by the SDN from the consumers over five to 10 years. The collection should be implemented through tariff reviews, adjustments and special interventions by the FGN, supported by instruments approved by development finance institutions (DFIs). Alternatively, liquidity and payment support mechanisms/solutions from the government such as the inconclusive NBET bond programme/issuance of medium term notes can be further explored in order to enable NBET to shore up its capital to address the existing debt to gencos and potential future revenue shortfalls from discos. Such instruments/solutions should be medium to long term in nature, possibly for the duration of the NBET licence or until such a time that the revenue shortfall has been completely addressed.

Recently, the World Bank Group approved the Nigerian power sector recovery programme. We understand that controlling the cost of electricity is a critical element of the recovery plan. Furthermore, a full range of instruments will be deployed to help the FGN mobilise investments directly from the private sector and through private sector guarantees. It is also believed that this will attract private sector investment to the sector when implemented. While not being a direct intervention, the FGN's decision, in the case of the 561MW Calabar power plant, constituted under the National Integrated Power Project (NIPP), to provide a cash-backed indemnity on the gas partial risk guarantee granted to Accugas, to deliver gas to the power station, is a step in the right direction. Such initiatives will encourage the mobilisation of private capital to fund project development and construction of power projects.

We recommend that FGN interventions in the sector should be adequately priced and should not exceed 200 to 300 basis points. The CBN's Nigerian Electricity Market Stabilisation Facility is in our view, overpriced at 10%.

Going forward, electricity consumed by military ministry department and agencies of the government (MMDAs) should be deducted directly from their budgetary allocations. The outstanding debts owed to the sector by the MMDAs should also be deducted at source from their budgetary allocation. Given that the debt is so huge and may not be repayable at once, an amortisation methodology spanning three to five years and which guarantees monthly payments by the MMDAs from their budgetary allocation until all outstanding invoices are settled in full, may be agreed with the sector participants.

Option two

This option will entail the creation and use of regulations in the sector to enhance revenue generation. The regulations will deal with issues such as timely reviews of electricity tariff to tackle changes in macro-economic assumptions, such as inflation and foreign exchange, which will affect the price and cost of electricity in Nigeria. The NERC could adopt one or more of the following three approaches to regulating utility prices in order to achieve optimal result:

- a. Rate of return regulations;
- b. Cost of service regulations; or
- c. Price regulations - e.g. MYTO

The primary driver in option two is that NERC should publish, and maintain a cost reflective tariff and a regulation that will enable discos, based on established, auditable indices to, automatically adjust for the:

- difference between the actual cost of electricity and the tariff at which energy is sold to consumers;
- foreign exchange fluctuations.;
- changes in inflation - the difference between the rate of inflation published by the Federal Bureau of Statistics (at the time of writing around 17.24%) and as contained in the MYTO methodology (at the time of writing around 10%); and
- adhering to the tariff review timelines in the MTYO.

The NERC has approved a 10 year tariff path for each disco, and should therefore, publish an amendment to each disco tariff, which will grant discos the rights to automatically adjust their tariff and billing to take into consideration fluctuations in exchange rate, inflation, gas prices, e.t.c.

The NERC should also publish a regulation on the payment and collection of MMDA debts owed to discos. The debt should be ascertained, and amortised over a three to five year period, and deducted from each MMDA's budgetary allocation monthly along with tariff for current consumption.

DFIs, such as the World Bank Group and the African Development Bank, should work with the FGN in developing more policy support instruments that create benchmarks for providing financial support for the power sector.

The FGN, under any funding plan with DFIs should provide guarantees against political interference with published regulations forming part of the reform, such as those dealing with tariff regulation. Any change by the regulator in published regulation should constitute an event of default on the part of the FGN that will result in cross defaults under other funding agreements.

The NERC should issue a regulation against the depletion of disco customer base through off-grid distribution and embedded generation facilities by estates and industrial parks. Such regulation should provide a clear path and mechanism on the sharing of revenue between the disco and the investors in such projects through the payment of franchise fees to discos by off-grid distributors (e.g. similar to the manner in which the NERC receives 1.5% of the revenue collected per kilowatt hour of electricity consumed by consumers as NERC's annual operating levy).

Power theft regulation will also be necessary to address the issue of who pays for such losses.

Other solutions include (a) improving infrastructure to reduce ATC&C Losses and increase collection efficiency; (b) securing the management of the TCN by an independent private sector based contractor; (c) allowing consumers to directly purchase their own meters based on disco specifications; (d) implementing clear policy on energy mix, especially incentives and support for renewables; and (e) enhancing community protection of pipelines to address militancy and pipeline vandalism, which affect gas supply for power generation.

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About the author

Nicholas Okafor heads the firm's power team. His core specialisations are energy (including electric power), projects and infrastructure transactions. He has advised on numerous transactions and issues as diverse as establishment, operation and maintenance of independent power plants, debt restructuring, derivatives and eurobonds. He is ranked as a IFLR1000 leading lawyer for project finance, and is recognised by Legal 500 and Chambers for his banking and finance practice.

Okafor routinely advises generation companies and distribution companies on ways to legally resolve the issues arising from the liquidity challenges in the power sector, including corporate restructuring, refinancing, and advocacy.

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Adeola Sunmola is a member of the firm's projects and project finance teams. Her specialties include syndicated lending, debt restructuring, corporate restructuring and project finance. She has advised lending syndicates on project finance agreements for power plants, steel mills and a cement plant. Recently, she co-lead the team that advised Actis on its investment in the 459 MW Azura- Edo gas fired independent power plant in Edo State, Nigeria.

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