UNLOCKING INVESTMENTS IN THE NIGERIAN POWER SECTOR: WILL THE WEST AFRICAN POWER POOL PROVIDE THE NEEDED RESPITE?

INTRODUCTION

The fact that Nigeria sits on huge gas reserves estimated to be in the region of 187 trillion standard cubic feet is not news. If properly harnessed, experts say that this significant reserve is enough to generate electricity in excess of Nigeria's needs. In addition, the country possesses an array of hydro and other renewable energy resources that should drive investments in renewable power generation. To cap it all, Nigeria is further blessed with a vast population which, coupled with the monumental deficit in electric power supply relative to demand, should make Nigeria a ready market for large investments in the power sector. In effect, given such potentials, it is expected that the Nigerian power sector would have been at the forefront of attracting foreign direct investments into the country.

The sad reality is that in spite of the flurry of activities and expectations that followed the privatisation of power assets over five years ago, and the subsequent financial close and commencement of commercial operations by the Azura power project (the first in the new wave of private sector led greenfield power plants), there seems to have been some investment apathy in the sector – especially for grid based projects. At the privatisation handover date, the proceeds realised from the sale of the successor companies were a little over US$2.5billion. Given the significant value of the investments, the natural expectation was that the trend will continue, and more investments will ceaselessly flow into the sector but this, sadly, has not been the case. As it stands, there appears to be several transactions

lingering or stalled in the power sector pipeline, without any notable project achieving financial close or gaining significant traction. The 14 solar power projects that signed power purchase agreements ("**PPA**") with the Nigerian Bulk Electricity Trading PLC ("**NBET**") in 2016 were expected reinvigorate the market, but that "breath of fresh air" is still being awaited.

Recent figures seem to indicate that rather than attract the much-needed investment, the power sector has been losing money. According to the Federal Ministry of Power, the estimated amount lost due to insufficient electricity distribution, inadequate gas supply, poor transmission and low water reserves in the sector in 2018 stood at approximately N475 billion. The reasons for these losses, and indeed the low investment appetite in the sector, are not difficult to find. They could be attributed to the general issues affecting the sector including the low tariffs, high collection losses and the rumoured reluctance of the Federal Government and other multilateral institutions to offer further credit support to the sector. It is in the light of these challenges that the market presented by the West African Power Pool (**WAPP**) appears to offer a ray of hope.

The West African Power Pool

The WAPP is a specialised institution of the Economic Community of West African States (**ECOWAS**) founded in the year 2000 covering 14 out of the 15 Member States of the regional economic community (Benin, Côte d"Ivoire, Burkina Faso, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo). The vision of ECOWAS in setting up WAPP is to ensure the regional integration of the West African electricity sector into a unified market that will enable the population of ECOWAS benefit from a more reliable and affordable electricity supply.

Membership of WAPP is voluntary and is open to any entity, public or private, which: (a) owns/operates generation facilities of 20MW or larger, and /or distributes and retails electricity; and/or (b) owns/operates "major transmission facilities in the region", if such facilities are physically interconnected and have an impact on coordination of system operations in the West Africa region; or (c) has an interest in the electricity sector in the West Africa region.

This broad description means the membership of WAPP is available to a lot of private entities that are interested in taking advantage of the wider market network. For generation companies, the applicable threshold of 20MW is significantly lower than the threshold for which a new entrant can sign a PPA with NBET which is presently set at a minimum of 30MW. In context, this means that it is easier in terms of minimum required capacity for an investor to connect to the WAPP than to connect to the grid in Nigeria.

Energy Demand in the WAPP Region

It is currently estimated that the electricity sector in WAPP member States provides power supply to only about 30% of the population[1]. The region's maximum load is said to be just above 7,000 MW as against a total energy demand that is far exceeds this figure. For example, according to the ECOWAS Revised Master Plan for the Generation and Transmission of Electricity developed for the WAPP for the period 2012 - 2025, the population of West Africa is projected to reach 448 million while the maximum demand is estimated at 31,870 MW. Within this context, the combined

[1] WAPP Business Plan 2012-2015

demand in Nigeria, Benin, Togo, Ghana, Cote d'Ivoire, Niger and Burkina Faso could reach 27,871 MW by 2025, while combined demand in Mali, Senegal, Guinea, Gambia, Guinea Bissau, Sierra Leone and Liberia could rise above 4,000 MW by 2025.

This vast existing energy demand coupled with a projected upward trajectory over the foreseeable future presents a veritable opportunity for players in the power sector of ECOWAS member states to take immediate advantage. For Nigerian companies, engaging in the WAPP entails participation in cross-border trade in electricity which raises the pertinent issue of the existence or otherwise of an enabling domestic framework for such cross-border participation.

Framework for Trading in Electricity in Nigeria

The general legal and regulatory framework of the Nigerian power sector is established under the Electric Power Sector Reform Act 2005[2] ("**EPSR Act**") and the several regulations, orders, codes, standards and manuals made pursuant thereto. In all of these, there appears not to be any specific regime for cross-border trade in electricity.

The EPSR Act[3] generally provides that only persons duly licensed by the Nigeria Electricity Regulation Commission ("**NERC**") (or deemed licensed under the EPSR Act) can construct, own or operate, or in any way be engaged in the business of **electricity generation; electricity transmission; system operation; electricity distribution;** or **trading in electricity**. The EPSR Act thus prohibits any person from engaging in any of the foregoing activities except in accordance with a licence issued (or deemed issued) pursuant to the EPSR Act.
In keeping with this statutory requirement, the NERC typically issues different classes of generation licences to categories of licensees who focus on different groups of off-takers. Inherent in the right to generate such electricity is the power to sell the generated capacity. For instance, the **grid connected licence holders** may enter into PPAs with NBET or any other purchaser of electricity that is or can be connected to the grid; the **off-grid licence holders** are allowed to generate and sell power to designated buyers without connecting to the grid; the **embedded generation licensees** generate power and evacuate same through the existing distribution facilities of a distribution licensee without utilising the grid network of the Transmission Company of Nigeria ("**TCN**").

The typical terms and conditions of generation licences provide that the licensees shall sell the power to only the class of off-taker(s) approved by the NERC. No sale of electricity to an unapproved class of off-takers is permitted unless prior approval has been given by the NERC. Failure to comply with this condition may result in suspension or cancellation of the licence. This implies that sale to other off-takers including those outside the country like in the WAPP region is not expressly or impliedly prohibited. All that may be required is for the licensee to seek and obtain prior approval of the NERC to sell to such other off-takers if they were not so approved at the point of issuance of the licence. Thus, where the licensee at the point of application indicates that its off-taker(s) are based outside the country, the licensee may be granted the licence on the basis of such named off-taker(s). In this sense therefore, participation in the WAPP regional market is open to existing and potential investors in the power sector.

We are not aware of any class of electricity licensees specifically designated as international licensees although there appears to be a generation company in Nigeria that has

[2] Electric Power Sector Reform Act, No. 6 of 2005

[3] Section 62(1) of EPSR Act

successfully sought and obtained NERC permission to sell electricity outside the country notwithstanding that it was initially licensed to sell within the country. Any generator seeking to participate in the market will surely need to first hold a grid connected licence as the grid will necessarily be used to wheel the power outside the country and into the regional pool. Such generation companies will also have to enter suitable contractual arrangements with the TCN and pay the appropriate wheeling charges to transport the electricity.

Likewise, in line with the typical terms and conditions of generation licences, there must be regulatory approval for the PPA with such international customers. Although it is likely that the tariff for this will be on a willing buyer/willing seller basis, NERC would however, consider such PPAs, as it does for its licensees, irrespective of the tariff provisions, apparently with a view to ensuring that the contract is within the licence terms and conditions of the licensee and the contract provisions do not impede on the regulatory powers of NERC.

Will the WAPP unlock investments in the Nigerian power sector?

On the face of it, the WAPP presents a veritable opportunity for investors in Nigeria to tap into a regional market that gives investors the chance of exporting electricity across the border to a ready regional market. The region's reliance on gas-fired power generation means that Nigeria, with its enormous proven natural gas reserves will be a dominant player in this space. It was expected that the success of the privatisation in Nigeria would increase domestic generation, which would ultimately result in an overall increase in regional generation. However, this projected growth has been constrained by transmission, distribution and other market challenges. On the other hand, the regional market is not expected to be constrained by the limited transmission and distribution capacity in the country as well as the liquidity and payment challenges prevalent in Nigeria. In any case, given the reportedly wider distribution infrastructure in the member countries of the WAPP and the general framework agreement of the WAPP, there is a likelihood of more collection efficiency and remittances upstream. This will spur further investments and growth in the regional electricity trade, although sadly, this is yet to materialise.

Furthermore, it appears that a significant part of the infrastructure required for the operation of the grid within the sub-region has been funded by either the African Development Bank or the World Bank. For example, the World Bank is said to have dedicated US$750 million in IDA funding to support the WAPP and intends to further step-up its support. This implies that other than the credit support for infrastructure, given the interest of these multilateral agencies, the energy trade within the region may be more amenable to the various credit support mechanisms provided by the multilateral agencies.

Another key potential presented by the WAPP to improve investment in the power sector in Nigeria is the possibility of increased generation capacity that will service an integrated regional power market. One of the debilitating problems of the power sector in Nigeria is the distribution and transmission constraints. These, coupled with the downstream payment challenges have disincentivised investments in the grid connected generation space. Recent attempts at generation have mostly focused on the off-grid space. Thus, the WAPP outlet provides a window for some investors to look across the border and generate for a regional market.

In addition, as earlier noted, the mismatch in natural resources endowment creates an opportunity for energy trade as contemplated by WAPP to balance the production and supply of electricity among the countries in the region.

For instance, Nigeria owns the largest reserves in hydropower resources, and gas reserves, exploitable over short and medium terms. This gives Nigeria a comparative advantage in exploiting these resources for power production. Countries within the sub-region with little fuel or hydro resources or with markets too small to exploit economies of scale can benefit by interconnecting to WAPP to take advantage of the generation capacity and the grid of their neighbours with surplus capacity or resources. For instance, the bulk of Niger's electricity needs comes from Nigeria via the interconnection line between the two countries.

Indeed, the integration of electricity grids within the region will improve overall reliability and make electricity more affordable simply by allowing all countries to benefit from least-costly resources available in the region. The regional power system is also expected to become more resilient by easily balancing unexpected energy shortages. The sizeable and reliable market created by integrating these fourteen countries will be more attractive to private sector investment in power generation especially in Nigeria where there exists a huge economy of scale due to abundant resources. The sale of electricity into the regional market, if backed by prompt settlement and financial liquidity, will significantly improve revenues of the participant generation companies and this will attract further investments in this area.

Admittedly, such international sale will not be without its own challenges but thoughts on how to resolve those challenges are being and can be developed and properly refined. For instance, according to a World Bank report, the payment record of trading partners in the WAPP region is uneven given that as recent as 2016, arrears reached such a level that WAPP formed a Task Force on Cross-Border Payments for Power Trade to recommend solutions to this problem. The Task Force recommended series of actions to improve confidence in the regional power market. These included improving sector creditworthiness, strengthening contracts, providing guarantees and involving regional institutions. The success of these institutional reforms is critical to the continued growth and viability of the WAPP market.

Participation in the WAPP market will require significant investments in the transmission section of the grid in Nigeria and in the region. This is important to ensure adequate systems integration and synchronisation that will enable more capacity to be easily transported across the borders with reduced technical losses. This presents a unique opportunity for the country to further invest in expanding and strengthening the grid to serve the regional market. The corollary effect of this is that the grid in Nigeria will also become more robust with an expanded capacity to take on more generators.

We do not pretend that the WAPP is, or can be, the magic wand for most of Nigeria's electricity problems. The domestic problems in the sector such as the transmission and distribution constraints, payment shortfalls in the market, low tariffs, and the general liquidity issues will not disappear until concerted efforts are by all stakeholders to specifically address them. Thus, the additional capacity generated will be for export to the regional market with a view to bringing in foreign exchange earnings, creating jobs and generally adding value in the generation space. In time, and with the right conditions, this expanded capacity can be easily deployed in-country once the teething problems currently affecting the market are resolved.

In essence, given that the generation resources abound in Nigeria, and the main problems appear to be around transmission, distribution, tariffs, liquidity and similar issues, power investors may establish generation companies sited in Nigeria with a view to exporting their generated capacity into the WAPP. While this might immediately benefit the investors in that

segment of the market, the approach which the government will take to this is uncertain since there is currently no clear-cut regulatory framework for that arrangement and doing so could arguably divert investors' attention from domestic supply (which Nigeria very much needs) and refocus their attention on a seemingly lucrative regional electricity market.

CONCLUSION

To achieve an optimal regional power market, the region will require not only the right infrastructure, but also strong collaboration among policy makers, regulators, and utilities, at the national and regional level. To put things in context, the WAPP infrastructure requirement cost is projected at about $14 billion and will require about 16,000 kilometres of new power lines running across 14 countries as well as transformers, substations and the other equipment needed to run an electricity grid. On the technical side for instance, it is stated that the various countries will have to amongst others synchronise their power supply such that the electricity that is generated across the sub-region have the same power frequency.

The region will also need to harmonise tariff and transmission charges as well as increase competition. These and many more complexities of the WAPP power market will have to be addressed to ensure an optimal operation of the regional market. Although this is certainly an ambitious project, we believe that if the required mechanisms are put in place, it should achieve success and serve as a good vehicle to unlock the investment potentials of the power sector in Nigeria and across the West African sub- region.

KEY CONTACTS:

Desmond Ogba
Partner, Energy & Projects

desmond.ogba@templars-law.com

Moses Pila
Senior Associate, Energy & Projects

moses.pila@templars-law.com