

PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE

Report No.: AB6841

Project Name	Nigeria Power Sector Guarantees Project (PSGP) (P120207)
Region	AFRICA
Country	Nigeria
Sector(s)	Power (100%)
Lending Instrument	Partial Risk Guarantees
Project ID	P120207
Borrower(s)	Federal Republic of Nigeria
Implementing Agency	Nigeria Bulk Electricity Trading Company Ltd
Environmental Category	A-Full Assessment
Date PID Prepared	11-Apr-2014
Estimated Date of Appraisal Completion	26-Mar-2014
Estimated Date of Board Approval	1-May-2014
Decision	
Other Decision	

I. Project Context

Country Context

1. The Federal Republic of Nigeria has experienced stable economic growth averaging 8 percent over the past decade and 7.4 percent in 2013. In the context of high economic growth, Nigeria's key challenge is to make its growth more inclusive. Of the millions of Nigerians who enter the labor market each year, only 10 percent are able to find formal jobs. As a result, (formal) unemployment grew from 19.7 percent to 23.9 percent between 2009 and 2011, affecting principally the young (15-24 age group) with a rate rising from 25 percent in 2009 to 37.7 percent in 2011. A statistical rebasing of the gross domestic product (GDP) in 2014 reveals that Nigeria has obtained the status of a middle income country (GDP of nearly US\$ 510 billion), and has the 28th largest economy in the world.

2. A large and rapidly expanding population of 170 million represents an opportunity for economic development and increased employment if new markets can be unlocked. As of 2013, service sector and agriculture sector comprised the largest share of GDP, followed by trade, and oil and gas sectors. Greater market connectivity toward a unified domestic market is a key precondition for achieving rapid diversified growth that can promote small and medium enterprises, create jobs, and reduce poverty. By making markets more inclusive, Nigeria can extend opportunities to the poor and other excluded groups.

3. While Nigeria is currently in an advantageous position for accelerating economic development, the country still faces a number of major challenges. Despite the economic growth, Nigeria has yet to find a

formula for translating its resource wealth into significant welfare improvements for the population. Job creation and poverty reduction are not keeping pace with population growth. Nigeria's progress toward the Millennium Development Goals (MDGs) has been slow, with indicators in some areas resembling those in the poorest countries in Africa. With a fiscal reserve still less than US\$10 billion, the macroeconomic picture in Nigeria is also still quite vulnerable to an oil price shock. The country is also facing complex conflict and security challenges.

4. Nigeria's population size makes its progress in reducing extreme poverty very important for achieving the global target of 3 percent by 2030. Nigeria is the most populous country in Africa and the seventh most populated in the world. Using the official national poverty line and per adult equivalent consumption, the poverty rate declined from 48.5 percent in 2004 to 45.7 percent in 2010.

5. The growth and poverty reduction strategy for Nigeria has to be built on the broader comparative advantages which include a diverse population, a focal point of connectivity for Northern and Southern cultures on the Africa continent and a gateway to Central Africa. Economic diversification through improvements in governance and service delivery, increasing productivity, improved infrastructure and human capital, and a progressive regional policy will unlock the development potential and support strong and inclusive growth and accelerated job creation. The growth and poverty reduction strategy for Nigeria also has to respond to the acute needs of the poor while boosting shared prosperity.

II. Sectoral and institutional Context

6. Nigeria is one of the world's largest oil exporters and is endowed with abundant domestic energy resources, including the eighth largest reserves of natural gas and significant untapped hydropower potential along the Niger River. Despite these favorable conditions, access to energy services is low: only a third of the demand for power is supplied from the national grid, those connected to the grid face multiple daily power cuts, and more than 100 million citizens (approximately 65 percent of the population) are left entirely without access to electricity. This power crisis is an obstacle to economic growth and has a negative impact on the everyday lives of Nigerians. In the 2010 Nigeria Investment Climate Assessment, 83 percent of Nigerian business owners consider a lack of electricity the biggest obstacle to doing business (compared to 14 percent of Indonesian businesses and 28 percent of Kenyan businesses).

7. The demand for electricity in Nigeria vastly outpaces supply. Over the past decade, Nigeria's publicly owned and operated electricity system has been failing to meet Nigeria's power needs. In early 2013, the total available capacity was around 3,500 MW which was significantly below the suppressed demand estimated to exceed 6,000 MW. The growth in demand in the Nigerian power sector is expected to continue to increase at around 10 percent per annum in the medium term, reaching 10,000 MW (medium growth rate scenario) to 14,000 MW (high growth scenario) by end of the decade. However, at the current commissioning rate, the supply would barely reach 9,500 MW by 2020. The supply shortfalls are further marred with generally inefficient technical and commercial management of the grid system leading to frequent interruptions and poor service quality.

8. Nigerian businesses experience an average of 239 hours of power outages per month, accounting for nearly 7 percent of lost sales. As a result, most private enterprises are forced to resort to self-generation at a high cost to themselves and the economy (about US\$30-50 cents per kWh as compared to the current grid based tariff of US\$0.13 per kWh). By some estimates self-generated power now substantially exceeds grid-based power in Nigeria. Studies estimate self-generation at 6,000 MW against 3,500 - 4,000 MW available in the grid. Aside from the health, environmental and efficiency implications of self-generation, the practice has forced firms to divert financial resources away from productive uses, lowering productivity and competitiveness. The limited electricity that is generated

from Nigeria's ailing power plants is often trapped by capacity constraints in the transmission and distribution networks, which has been exacerbated by years of poor maintenance brought about by inadequate funding from tariffs and poor revenue collection rates. Much of the electricity generated is lost due to high aggregate technical, commercial, and collection (ATC&C) losses, estimated at about 35 percent, and outright theft, that occur before the revenues are collected and re-injected into operations and maintenance.

9. Power generation is also constrained by the inefficient exploitation of Nigeria's abundant natural gas resources. Natural gas is an affordable, large-scale energy resource and can play a critical role in the primary energy portfolios of many African nations. However, the investment and associated gas price required for stable gas supply to develop the Nigerian power sector is not keeping pace with demand. Nigeria can also play a key role in the regional markets as an exporter of natural gas and power, should this limitation be addressed. Nigeria is already a participant in the West Africa Power Pool (WAPP) and the West Africa Gas Pipeline (WAGP) - key infrastructure that can assist regional power trade.

III. Project Development Objectives

10. The development object of the PSGP Project is to increase the supply of electricity to the Nigerian consumers.

IV. Project Description

11. The proposed Series of PRGs (the Series) will support the implementation of the Roadmap for Power Sector Reforms. Each PRG will support a specific transaction, such as a greenfield IPP, a GENCO privatization, or a DISCO privatization. Each of the transactions supported will fall under one of the PRG Series Sub-Components (described below) and the commercial, technical, economic, financial, safeguards due diligence will be similar for each transaction as described in this PAD. The PRG Series will support transactions on a first-come-first-served basis. As per the FGN's request and FGN's borrowing plan with the Bank, the proposed Series is initially expected to be capped at US\$700 million in the form of IBRD PRG support. Guarantees will be provided in support of private transactions, as and when such transactions are ready. The proposed support (up to US\$395 million) for Azura Power and Exxon QIPP will form an integral part of the series. Subsequent transactions will be presented to the Board for approval as additional financing to the PSGP PRG Series.

12. The proposed Series contains: Component 1: PRG Series with three sub-components based on the type of transactions supported:

- (i) Sub-Component 1: Greenfield IPP Transactions;
- (ii) Sub-Component 2: Privatization of GENCOs; and
- (iii) Sub-Component 3: Privatization of DISCOs.

13. Sub-Component 1: Greenfield IPP Transactions: Support to greenfield IPPs will include the option of both credit enhancement for NBET and private debt mobilization support, i.e.: (a) the NBET credit enhancement guarantee, with or without Letter of Credit; (b) the commercial debt mobilization guarantee; or (c) a combination of both forms of guarantees. The first generation of fully project financed IPPs will need a reasonable securitization package to close, as most of the key agreements with responsible government institutions (such as NBET, Market Operator, NERC) have yet to be tested. The FGN has agreed to provide a backing of NBET's obligations and a combination of termination and liquidity cover through MIGA/IBRD. As the commercial framework and market performance is confirmed, subsequent pipeline transactions should expect gradually lower securitization support both in terms of outright FGN support to NBET as well as WBG guarantee instruments until the market

develops to the point where willing buyer-willing seller transactions are possible. Annex 2 provides a brief description of the pipeline for greenfield IPPs. Two greenfield IPP transactions have been identified for PRG support (the Azura Edo and the Qua Iboe IPPs). These are described below in more detail. Additional IPPs are being identified for support as transactions mature.

14. Sub-Component 2: Privatization of GENCOs: The structures of the PRGs in support of the GENCOs will be similar in terms to greenfield IPPs. The PRGs could support the initial capital mobilization that is anticipated to be carried out by the new owners of the 6 new GENCOs. New finances could be used for expansion of the available capacity of the plants or for rehabilitation of the currently installed but unavailable capacity. The PRG support will be for: (a) the NBET credit enhancement guarantee, with or without Letter of Credit; (b) the commercial debt mobilization guarantee; or (c) a combination of both forms of guarantees. However, currently, the capital expenditure (CAPEX) plans are being developed by the new owners who have recently taken over the GENCOs. Annex 2 provides a description of all the privatized GENCOs (not the prioritization of transactions). The privatized GENCOs include both gas fired as well as hydropower companies.

15. Sub-Component 3: Privatization of DISCOs: It is important that each link in the energy value chain be fully functional for the reforms to be effective. The ability, therefore, of the DISCOs to successfully turn around dismal customer service levels and improve revenues flows to finance investments upstream in the value chain will make or break the power sector reform efforts. The PRG structures available to DISCOs may fall into one of the following categories: (a) commercial debt mobilization guarantee; and/or (b) regulatory risk guarantee (draft Term Sheets in Annex 10). The PRGs to be provided under sub-component 3 are necessary to ensure the DISCOs are able to attract the CAPEX financing required to implement the investment plans proposed by the new owners, and provide confidence to commercial lenders that the regulatory process will not be reversed. The criteria used for selecting DISCOs will include, inter alia, their revenue potential, cost effectiveness (using population density as a proxy), industrial customer base and access to electricity generation. Out of the 11 DISCOs being privatized, four have been identified as advanced stage candidates: Abuja DISCO, Benin DISCO, Eko DISCO, and Ikeja DISCO. Annex 2 provides a description of the four DISCOs.

The First Two IPP Transactions in the PRG Series (Under Sub-Component 1)

16. The first two front-runner transactions (up to US\$395 million) are fully described in this PAD. By mitigating the uncertainty that these frontrunner transactions face, the PRG Series will augment the reforms and build market confidence and set industry benchmarks. The successful implementation of the first set of transactions will be critical to the success of the power reform agenda, as it will confirm the viability of the financial, transactional and regulatory systems put in place under the reform program. In the longer term, as Nigeria's power sector reforms progress through the transitional phase, it is expected that the need for risk mitigation will decrease, as NERC, NBET, and TCN establish track records of successful financial and operational performance. The FGN has nominated, as transactions that require credit enhancement and debt mobilization support in the short to medium term, a total of 18 new greenfield IPPs, 6 privatized GENCOs, and 11 privatized DISCOs. This PAD presents the PRG design for the complete Series and appraises the overall scope of the universe of transactions to be supported. It also presents the first two greenfield IPP transactions for Board approval. A pipeline of IPPs, GENCOs, and DISCOs that are in advanced stage of preparation has been established and will be considered for PRGs when mature. Subsequent PRGs will be presented to the Board as additional financing to the PSGP.

17. The first two IPP transactions will increase the installed power generation capacity by around 1,000 MW, and deploy nearly US\$2 billion in financing, which includes about US\$1.7 billion of private

capital. The initial set of greenfield IPP transactions proposed for PRG coverage are as follows: Azura Edo IPP (Azura) and Qua Iboe IPP (QIPP). These initial transactions inherently possess a higher level of risk and require diligent support in order to achieve success. In the long term, the risks as well as costs of such transactions are expected to reduce. The two greenfield IPP transactions that have been identified for PRG support under Sub-Component 1 are described as follows (draft Term Sheets in Annex 10):

- a) Transaction 1: Azura Edo IPP (up to US\$245 million): The Azura Edo IPP includes: (a) The NBET credit enhancement guarantee (up to US\$120 million), and (b) The commercial debt mobilization guarantee (up to US\$125 million). This open-cycle gas-fired power plant is being developed by Azura Power West Africa Limited (the “Company”), a Special Purpose Vehicle (“SPV”) incorporated in Nigeria, with the sole purpose of developing a 459 MW open-cycle gas power plant located in the vicinity of Benin City, in Edo State, Nigeria. The Sponsors are: (a) Amaya Capital Ltd., a principal investment firm and majority investor in Azura Power Holdings Ltd., its dedicated vehicle for investing in IPPs and the power distribution sector in Africa, jointly owned with the American Capital Energy and Infrastructure Fund, a fund managed by American Capital Ltd.; (b) Aldwych International Ltd. (“Aldwych”), an international power developer focusing on Sub-Saharan Africa; (c) African Infrastructure Investment Fund 2 (“AIIF2”), an Africa-focused fund managed by the Macquarie Group and Old Mutual which will invest through both its Rand-denominated and US\$-denominated vehicles; and (d) Asset and Resource Management Ltd., a leading Nigerian asset manager. The Sponsors are investing in the Company through Azura Edo Ltd. (the “Shareholder”), an SPV incorporated in Mauritius. The Edo State Government, the local State authority, is also expected to have a 2.5 percent shareholding in the Company. The Power Plant will be located in Edo State and will have an installed capacity of about 1,000 MW, developed in two phases (a first phase of 459 MW and a second phase of 500 MW. It is possible that the Company later converts the first phase project into a combined cycle plant and then adds ‘Phase 3’ thus the total capacity could reach 1,500MW). The Plant is expected to include 4 high voltage (15 kV to 330 kV) transformers, one for each of the generator sets and a switchyard that is designed to accommodate additional capacity in the event that plant is converted into combined-cycle. Power will be evacuated from the switchyard through a single tower on a new 330 kV transmission line connecting the plant to the adjacent 300/132 kV new Benin North substation, currently under construction. Total transaction costs are estimated at US\$813 million, expected to be financed on 72.5:27.5 debt-to-equity ratio. The most advanced of the IPPs, Azura has already executed its PPA with NBET as part of the Presidential Signing Ceremony held 22 April 2013 in Abuja, although certain aspects, such as the security package provided by NBET under the PPA, and termination provisions under the Put Call Option Agreement (PCOA), including the final PRG terms, are being finalized.
- b) Transaction 2: Qua Iboe IPP (up to US\$150 million): The Qua Iboe IPP includes the NBET credit enhancement guarantee (up to US\$150 million). This 533 MW combined-cycle gas-turbine (CCGT) power plant is being developed by a Joint Venture (JV) between Mobil Producing Nigeria Unlimited (MPN) and the Nigerian National Petroleum Corporation (NNPC). MPN is a wholly owned indirect affiliate of Exxon Mobil Corporation, and is the operator of the JV. The JV is involved in the exploration, development, and production of several oil and gas concessions in Nigeria. The power plant will be constructed in Ibeno, Akwa Ibom State, on the south-eastern coast of Nigeria. The JV will also be responsible for the construction of a new, 58-km, 330 kV double-circuit transmission line connecting the plant to the new Ikot Abasi substation. The new substation at Ikot Abasi is part of a larger plan being progressed by the Transmission Company of Nigeria and the Niger Delta Power

Holding Company Ltd. to extend the grid from Ikot Ekpene to Ikot Abasi through a new 78 km transmission line that is scheduled to be completed by mid-2014. Selection of EPC contractors for the power plant and the transmission line is being finalized. QIPP has met the disclosure and consultation requirements for its power plant ESIA. The Nigerian Electricity Regulatory Commission has issued MPN the requisite power generation license. Total cost of the power plant is estimated at US\$1 billion. Transmission line is estimated to cost US\$136 million. Major agreements underpinning the project, e.g. the PPA and PCOA, are being finalized.

V. Financing *(in USD Million)*

For Loans/Credits/Others	Amount
BORROWER/RECIPIENT	0.00
IBRD Guarantees (up to)	395.00
Total	395.00

VI. Implementation

18. Azura IPP: Azura Power West Africa Ltd (Azura IPP) is a special purpose vehicle incorporated and registered in Nigeria in 2010 to develop, build, own, operate and maintain the Azura project. Its shareholders are Azura Edo Ltd., a company incorporated in Mauritius (97.5 percent) and the Edo State Government (2.5 percent). In turn, the ultimate shareholders of Azura Edo Ltd. are Azura Power Holdings Ltd. (50 percent), Aldwych International Ltd. (9.2 percent), FMO (4.8 percent), Africa Infrastructure Investment Fund 2 (through two separate Rand-denominated and US\$-denominated funds, for a total of 30.0 percent), and Asset Resource Management Ltd. (6.0 percent), (collectively, the Sponsors). The construction of the plant will be implemented through an Engineering, Procurement, and Construction (EPC) contract. The sponsors are finalizing the EPC contract with Siemens AG, Siemens Nigeria Ltd. and Julius Berger Plc. PIC Group, Inc., a US-based company wholly-owned by Marubeni, Japan's leading conglomerate and largest power producer will be responsible for the operation and maintenance of the plant. Azura is currently finalizing a Gas Supply Agreement (GSA) with Seplat Petroleum Development Company Plc. (details in Annex 2).

19. Qua Iboe IPP: Qua Iboe IPP is a joint venture (JV) between Nigerian National Petroleum Corporation (NNPC) and Mobil Producing Nigeria Unlimited (MPN). MPN is a wholly owned indirect affiliate of Exxon Mobil Corporation. The FGN has a 60 percent interest in the JV, with the remaining 40 percent owned by MPN including operating rights. As such, the project commercial and operational arrangements will be consistent with the JV's current practice. The JV expects QIPP to be constructed under three EPC contracts, one for the power plant, one for the transmission line between the plant and a substation in Ikot Abasi, and one for the gas pipeline. Gas for QIPP will be supplied from the off-shore Oso field, a JV asset operated by MPN. The JV expects to retain the EPC contractor as operator to operate and maintain the plant for a three-year term after the plant's commercial operations date, followed by MPN taking over the plant's operations (details in Annex 2).

20. NBET is wholly owned by the FGN and was incorporated in 2010 as part of the ongoing Nigeria power sector reforms. NBET, as the primary off-taker of power from IPPs, is responsible for developing and implementing the commercial arrangements for bulk power trade. NBET has been negotiating the

first PPAs with front-runner project sponsors under the MYTO 2 New Entrant Model PPA price benchmarks. In the transition phase, NBET will be entering into PPAs with new IPPs which intend to sell power to local distribution companies through the national grid. It will also sell power to the privatized PHCN successor (distribution) companies (additional information on NBET organizational structure and monitoring systems can be found in Annex 2 and 3). In addition to the contractual obligations projects sponsors will have with NBET, each power plant will be operating under a license issued by NERC detailing the rights and obligations of the individual IPPs under the existing regulatory code. Compliance with the operating license, including hearings with consumers and other sector stakeholders will be monitored continuously by NERC. Privatized GENCOs and DISCOs will also be supervised by BPE, as representative of the Federal Government under the Share Purchase Agreements. This will include adherence to the agreed business plans, including obligations to mobilize investment capital to reduce losses and rehabilitate the assets.

VII. Environmental and Social Safeguards

Performance Standards (PS) for Azura IPP

Performance Standards (PS)	Triggered
PS 1. Assessment and Management of Environmental and Social Risks and Impacts	YES
PS 2. Labor and Working Conditions	YES
PS 3. Resource Efficiency and Pollution Prevention	YES
PS 4. Community Health, Safety and Security	YES
PS 5. Land Acquisition and Involuntary Resettlement	YES
PS 6. Biodiversity Conservation and Sustainable Management of Living Natural Resources	NO
PS 7. Indigenous People	NO
PS 8. Cultural Heritage	YES

Safeguard Policies Triggered for QIPP

Safeguard Policies	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

VIII. Contact point

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