



Financial Solutions: Partial Risk Guarantee

Finance, Economics & Urban Development Department
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IDA provides Partial Risk Guarantee in Support of the West African Gas Pipeline Project

Project Overview

The **West African Gas Pipeline Project** (WAGP) includes: (a) a new pipeline system (678 km long) that will transport natural gas from Nigeria to Ghana, Togo, and Benin; (b) spurs to provide gas to power generating units in Ghana, Benin, and Togo; (c) conversion of existing power generating units to gas; and (d) as needed additional compression investments.

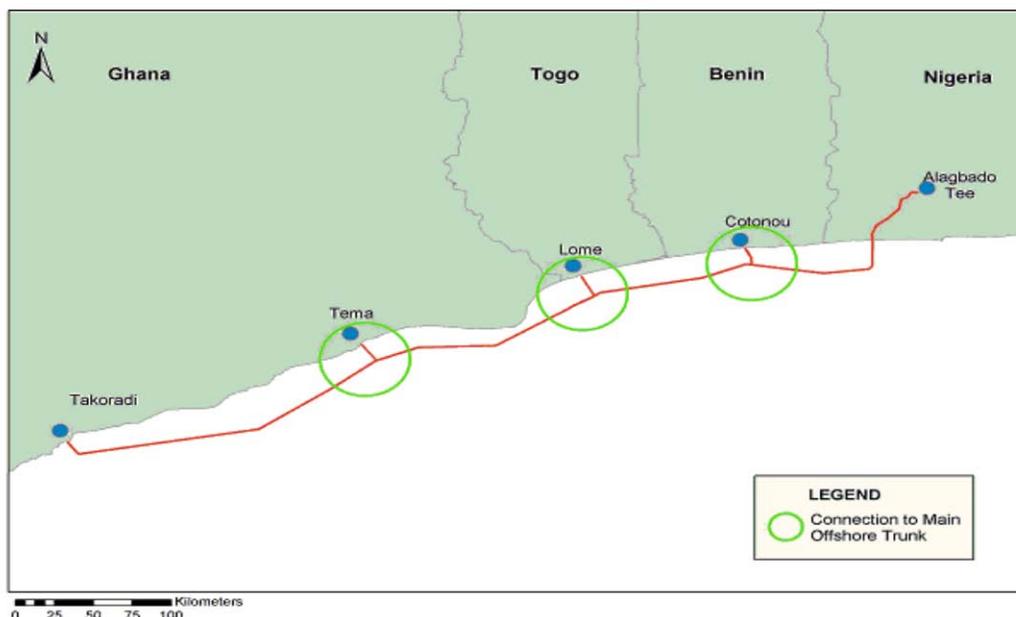
To meet the expected market potential of about 450 million standard cubic feet per day (MMscf/day), the new pipeline will be 20 inches in diameter. The main trunk of the offshore pipeline will be placed on the seabed in 26 to 70 meters water depths at an approximate distance of 15 to 20 kilometers from the shore. At three locations, connections will be made in from the main

offshore trunk into 8 inches or more lateral spurs, which will transport gas to delivery points at or near Cotonou (Benin), Lomé (Togo), and Tema (Ghana). The final terminal of the proposed pipeline system is at the Takoradi Power Stations (Ghana) with an option to extend the pipeline to other West African states, if feasible in the future.

The Project includes a number of (a) contracts for the design, engineering, construction, ownership, operation and maintenance, oversight, and political risk mitigation of the new pipeline; (b) contracts for the purchases of natural gas from the upstream Producers, for the transportation of natural gas by the Transporters, for the sales of foundation amounts of natural gas to the Foundation Customers; and (c)

The West African Gas Pipeline will transport natural gas from Nigeria to Ghana, Togo, and Benin

Figure 1 –The West African Gas Pipeline



Environmental Assessments and Resettlement Action Plans.

The new pipeline project does not include the ownership or operation of the Escravos-Lagos Pipeline System (ELPS) in Nigeria nor the extraction of hydrocarbons from the ground.

The Project brings substantial and reasonably allocated economic benefits to all four countries, as well as the private investors. In addition, all four countries will benefit from a reduction in air pollution.

Contractual Framework

The WAGP is a cooperative effort of the four States, the Producers, the Sponsors, the Transporters, the Foundation Customers, and the providers of political risk guarantees.

The implementing agencies for the four States are as follows:

Republic of Benin:	Ministère des Mines, de l'Énergie et de l'Hydraulique Cotonou, Benin
Republic of Ghana:	Ministry of Energy Accra, Ghana
Federal Republic of Nigeria:	Ministry of Petroleum Resources Abuja, Nigeria
Togolese Republic:	Ministère de l'Équipement, des Mines, de l'Énergie et des Postes et Télécommunications Lomé, Togo

The four States have established by treaty the **WAGP Authority** to, *inter alia*, monitor compliance by WAPCo of its obligations under the IPA; the WAGP Authority does not set tariffs, as these are regulated by contract and the pipeline access code.

Commercially, two new entities and one existing entity will implement the WAGP:

- **N-Gas Limited**, a newly formed entity owned by Nigerian National Petroleum Corporation (NNPC) (62.35%), ChevronTexaco N-Gas Limited (20.00%), and Shell Overseas Holdings Limited (17.65%) will contract for the purchase (from NNPC/CNL and NNPC/SPDC/Elf/Agip), transportation (by NGC and WAPCo), and sales (to VRA and CEB) of natural gas;

- **Nigerian Gas Company (NGC)**, a wholly owned subsidiary of NNPC, under contract from N-Gas, will transport natural gas from its sources in Nigeria to a terminal near Lagos over the existing ELPS; and

- **West African Gas Pipeline Company Limited (WAPCo)**, a newly formed entity owned by ChevronTexaco West African Gas Pipeline Company Ltd (38.2%), NNPC (26.0%), Shell Overseas Holdings Limited (18.8%), and Takoradi Power Company Limited (as shareholder for the Government of Ghana) (17.0%)¹ – referred to as the **Sponsors** of the Project – will build, own, operate, and transport (under contract with N-Gas) natural gas through the new pipeline system.

The **Foundation Customers** are Volta River Authority (VRA) and Communauté Electrique du Bénin (CEB), which will underwrite the costs of the new pipeline.

The contractual underpinnings of the Project are based on the following simplified value chain: (a) the Producers will sell natural gas to N-Gas under long-term Gas Purchase Agreements; (b) N-Gas will engage the Transporters to move the gas under long-term Gas Transportation Agreements; and (c) N-Gas will sell the gas to the Foundation Customers under long-term Gas Sales Agreements.

The principal Project agreements relating to the IDA Guarantee are:

- International Project Agreement (IPA) among the four States and WAPCo, providing for the development, financing, construction, ownership, and operation of the WAGP by WAPCo;
- Takoradi Gas Sales Agreement (Takoradi GSA) between VRA and N-Gas, providing for the sale by N-Gas and purchase by VRA of up to 120 MMscf/day of gas on a take-or-pay and ship-or-pay basis;
- Takoradi Gas Transportation Agreement (Takoradi GTA) between WAPCo and N-Gas for the gas being sold by N-Gas under the Takoradi GSA;

The WAGP is a cooperative effort of the four States, the Project participants, and the political risk guarantors

¹ In addition, two prospective shareholders nominated by the governments of Benin and Togo, Société Béninoise de Gaz S.A. and Société Togolaise de Gaz S.A., respectively, each independently hold an option to buy a 2.0% share in WAPCo.

- VRA Direct Agreement among VRA, WAPCo, and N-Gas whereby N-Gas assigns to WAPCo (as security for N-Gas's payment obligations to WAPCo under the Takoradi GTA) the component of the VRA termination payment and arrears owing to N-Gas under the Takoradi GSA corresponding to the same component payable to WAPCo by N-Gas under the Takoradi GTA; and
- Government Consent and Support Agreement (GCSA) under which Ghana, in compliance with its undertaking under the IPA, irrevocably and unconditionally guarantees to N-Gas and WAPCo the performance obligations of VRA under the Takoradi GSA and the VRA Direct Agreement.

The Project agreements allocate the risks among the parties. Generally, the private sector participants are taking the construction- and operations-related risks, while the public sector is taking the payment risks under the Foundation Customer GSAs, which are on a take-or-pay basis in US Dollars. Events of *force majeure* are shared among the parties; however a default by the Producers in delivering gas in Nigeria will result in the payment of liquidated damages to the Foundation Customers.

Sources of Natural Gas

Nigeria's proven natural gas reserves (associated (AG) and non-associated (NAG)) are conservatively estimated at about 125 trillion cubic feet. About 1,300 billion cubic feet of these reserves are produced annually, of which nearly 75% is AG and most of which is flared (2,500 MMscf/day). This gas could meet much of the power generation requirements of Sub-Saharan Africa, outside South Africa. All of the gas purchased by N-Gas for delivery in the new pipeline for about the first 10 years of the Project (*i.e.*, until the earlier of 10 years or reserved capacity reaches 200 MMscf/day, and open access begins) will be purchased from the Producers. This gas will be about 60% AG initially, declining to about 40% AG after 20 years, much of which would have been flared without the development of productive uses for gas, including WAGP.

The gas to be transported in WAGP will be gas produced from the western part of the Niger Delta in Nigeria. Two existing oil-producing joint ventures – referred to as the

Producers – will be producing, processing, and selling the gas to N-Gas under 20-year contracts. One is a joint venture of NNPC (60%) and Chevron Nigeria Limited (CNL) (40%). The other is a joint venture involving NNPC (55%) and The Shell Petroleum Development Company of Nigeria (SPDC) (30%), Elf Petroleum Nigeria Limited (Elf) (10%), and Nigerian Agip Oil Company Limited (Agip) (5%).

Uses of Natural Gas

The pipeline is being financed based on amounts of gas contracted upfront with the core customers, namely VRA and CEB. These customers are referred to as **Foundation Customers** and the volumes of gas they are contracting to purchase are referred to as the “foundation volumes.” The Project financing is structured on the basis of these contracted foundation volumes. In the early years, VRA would account for about 92% of the Foundation Customer demand and CEB would account for about 8% of the Foundation Customer demand. The final physical configuration of WAGP is based on market growth forecasts. As in most pipeline projects, the economics of the Project depend on the amount of gas actually transported through the pipeline, which in turn depends on the degree to which gas market growth is achieved. Several market studies have concluded that there is likely to be significant growth in demand, primarily in the power sectors, with total quantities contracted for transportation on WAGP peaking at approximately 450 MMscf/day in year 20 of the Project.

There is residual uncertainty over underlying short-term electricity demand in Ghana, particularly due to the financial problems of Volta Aluminum Company (Valco),² which owns an aluminum smelter near Tema. As a consequence, the WAGP gas tariffs have been structured to be sustainable both with and without the electric load of the Valco smelter.

Financing Structure

The Sponsors estimate the new pipeline to cost about US\$590 million; additional compression-related costs are estimated to be about US\$110 million over 20 years (which would be needed if the capacity

² On November 1, 2004, Kaiser Aluminum Corporation sold its 90% interest in Valco to the Government of Ghana.

The Project agreements allocate construction and operation risks to the private sector, payment risk to the public sector

requirement grows to the 450 MMscf/day target by the Sponsors under the agreed demand forecast). The initial US\$590 million cost will be financed through direct equity and shareholder loans to WAPCo from the Sponsors, and the subsequent compression-related capital expenditures are expected to be financed by cash flow from operations. WAPCo will recover its investments through gas transportation charges under its Gas Transportation Agreements (GTAs) with N-Gas and other future shippers.

From time to time, NGC is expected to incur some costs in upgrading ELPS for the additional WAGP volumes of gas and interconnections for inputs and output, as well as some additional operation and maintenance expenses associated with the additional volumes. NGC will recover its investments and additional costs through transportation charges under its GTAs with N-Gas.

After about five years, the Producers are also expected to incur some costs in upgrading and installing gas gathering systems and possibly gas treatment facilities upstream of ELPS, in the oil production areas of the Niger Delta and elsewhere. The Producers will recover their investments and other costs through gas sales under their contracts with N-Gas or any other entity that ships gas through WAGP.

IDA, MIGA, and Zurich/OPIC Guarantees

The political risk guarantees will involve complementary guarantees from IDA, MIGA, and Steadfast Insurance Company (a subsidiary of Zurich Financial Services Group, and substantially re-insured by Overseas Private Insurance Corporation (OPIC)). All will cover payments owing by the Government of Ghana in the event of termination of the Takoradi GSA with VRA, although there are differences in application of individual risk coverage. Each of IDA, MIGA, and Zurich/OPIC will have its own contractual undertakings with WAPCo. The basis will be pro rata allocation of claims; however, because of differences in structure and coverages, detailed mechanics under various scenarios have been agreed by the Sponsors with Zurich/OPIC, MIGA, and IDA. In the event of termination of the Takoradi GSA, different pro-rata allocations of claims have been identified for different demand and tariff scenarios. The allocation

of payouts in a claim situation would be based on these allocations.

The proposed IDA Guarantee scheme for the West African Gas Pipeline system is summarized in Figure 3.

Benefits of the IDA Guarantee

IDA played an important role in bringing the Project to financial closure. The Project would not have gone forward without the political risk guarantees. And the Bank's involvement brought together world's best practices in environmental and social safeguards implementation, economic and financial assessment, structuring for sustainability, and transparency.

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Figure 2 – Value Chain for Foundation

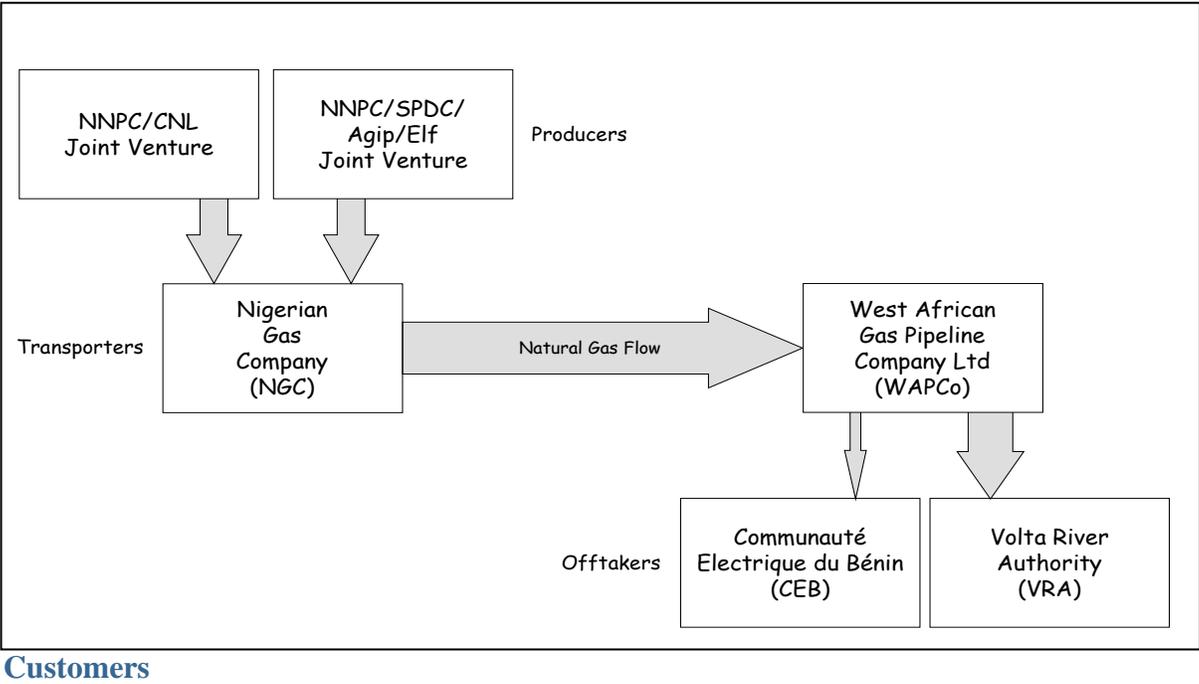


Figure 3 – IDA Guarantee Structure

