

Current Experience with Natural Gas Regulations in Nigeria By

Dr Haliru Dikko

A.G.M. Tariff & Rates Regulations

Nigerian Electricity Regulatory Commission NERC, Abuja.

Adamawa Plaza, off Shehu Shagari way, CBD-Abuja

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Outline

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The characteristics of Natural Gas in Nigeria

- Nigeria's current proven Natural Gas reserve is estimated at 184tcf. Its proven reserves are estimated to be twice its crude oil reserves
- Nigeria has the 7th largest reserve in the world. Its discovery was accidental in process of looking for oil
- Nigeria's natural gas is very rich with low sulphur and high in LPG
- Natural gas is traded through pipelines and LNG, about 75% of the traded volume is by pipeline, while the rest is as liquefied natural gas (LNG)
- LNG is the fastest growing segment of the world's energy supply matrix
- Projected growth rate for LNG is about 6% a year in the next two decades.

Nigeria's experience with Natural Gas

- Prior to 1999, exploration for gas in Nigeria was limited and much of the gas was flared.
- The domestic gas market in Nigeria remains largely underdeveloped.
- The Power Sector is the single largest consumer of natural gas in the domestic market with about 80% being consumed by the Power Holding Company of Nigeria (PHCN).
- Power sector growth translates to a direct growth in gas demand as a lot of proposed power plants are gas fired.
- Other sectors that utilize natural gas include:
 - Residential
 - Wholesale/Commercial
 - Gas based industries (Fertilizer, Methanol, etc)

Market structure for Natural Gas

- The sector is vertically integrated, albeit with Government involvement in all its functional segments either as a policy maker, regulator or commercial participant.
- There are two different potential markets: domestic market and export market
- Pricing methodologies need to consider the markets co-existing.
- The development of a gas pricing approach for the domestic market in any country requires the previous classification of several issues related to the market structure, and particularly the links between the domestic and the export markets.

Issues affecting Natural Gas production in Nigeria

- Lack of a clear fiscal framework for the Gas Sector.
 - Delays in Passing Legislative Frameworks and Laws
- Low electricity tariff resulting in low revenue.
- Low electricity revenue collection
 - Low working capital
 - Huge debt from non payment for gas
- Low gas tariff- Discourage Investors
- Inconsistent gas quality
 - Wet condensate laden gas supply
 - Reduced deliverability
 - Increased pigging of the pipelines
 - Reduced power supply

Issues affecting Natural Gas production in Nigeria (2)

- Security and community issues in gas supply area
- Vandalisation of gas supply infrastructure
- Inadequate coordination between Power and gas industries for project implementation and maintenance
- Lack of long term Gas Supply Agreement (GSPA)
- Timely availability of funds for implementation
- The condition of the pipelines varies from good for the few recently constructed systems to extremely poor for older systems.
- The country's gas pipeline infrastructure is largely situated in the southern part of Nigeria with no connectivity around central and northern Nigeria.

Scope of Gas Regulation in Nigeria

- The Government acts as a regulator and policy maker in respect of natural gas production, transmission, distribution and supply through the Federal Ministry of Petroleum Resources.
- The Federal Ministry of Petroleum Resources is statutorily responsible for oversight function of natural gas production, transmission and distribution.
- The Department of Petroleum Resources (DPR) also grants licenses and permits for petroleum operations and issues regulations necessary to give force and effect to primary oil and gas legislations.

The Nigerian Gas Company (NGC)

- The Nigerian Gas Company (NGC), a subsidiary of the NNPC, owns and operates the main pipeline transmission systems in Nigeria.
- Other gas transmission pipelines are individually owned by the NLNG and the NNPC/SPDC/Total joint venture.
- These pipelines are dedicated to the operations of the NLNG and the NNPC/SPDC/Total joint venture respectively.
- NGC's pipeline infrastructure comprises two pipeline networks totaling approximately 1, 100kms:
 - Alakiri-Obigbo-Ikot Abasi Pipeline System – the eastern network
 - Escravos-Lagos Pipeline System (ELPS) – the western network
 - The ELPS is a strategic 560km pipeline that transports gas from fields in the Niger Delta to Lagos, to the West African Gas Pipeline Project (WAGP), which is presently under development by the NNPC, Chevron, Shell and the Governments of Nigeria, Ghana, Togo and Benin.

The Role of NGC (2)

- The market for wholesale gas in Nigeria is dominated by the NGC which operates as a gas merchant in addition to its role as a gas transmission company.
- It has entered into several Gas Sale and Purchase Agreements (GSPAs) with gas producers in respect of the lean gas produced in their gas projects.
- There are two gas distribution companies in Nigeria:
 - Shell Nigeria Gas (subsidiary of SPDC)
 - Gaslink Limited

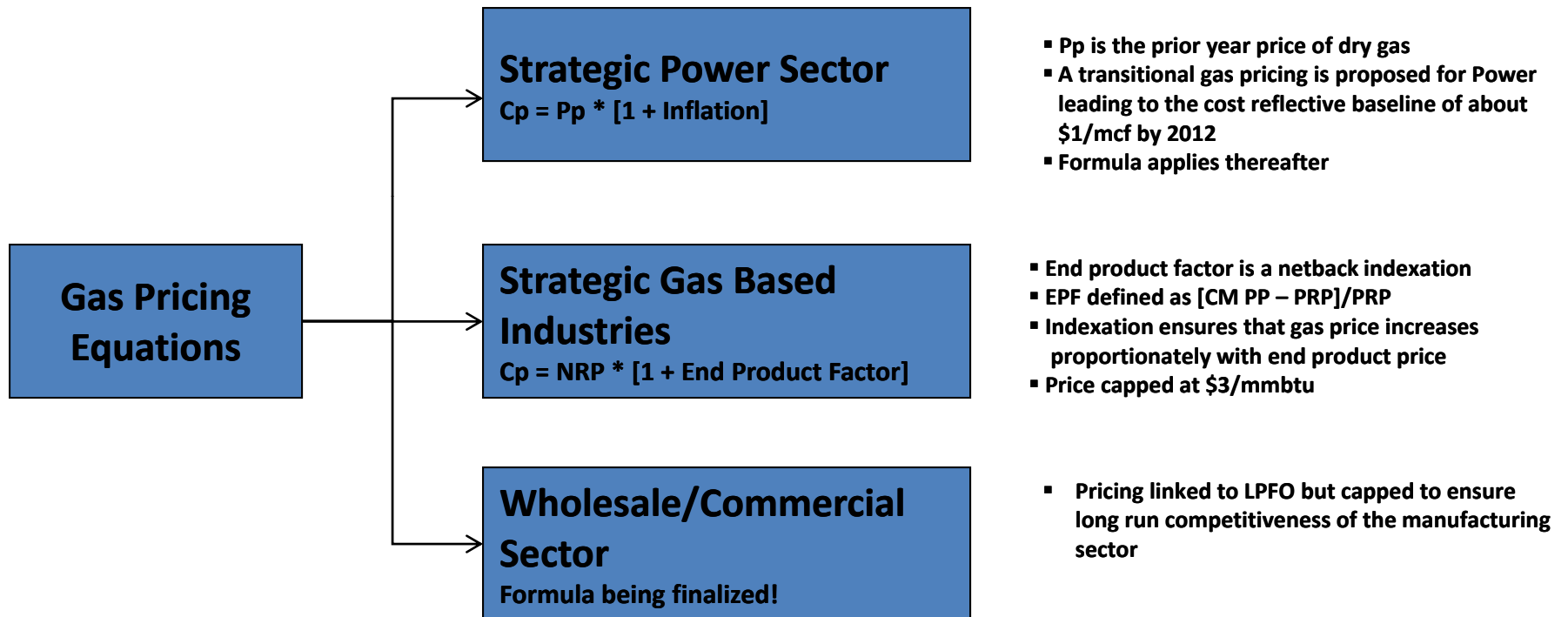
New Legal Framework and Regulations for Gas Sector

- Produced to expeditiously create in the short term a gas department within the Ministry of Energy to support the regulation and implementation of the Gas Pricing Policy and Domestic supply obligation
- Section 44(3) of the Constitution of the Federal Republic of Nigeria, 1999 and section 1 (1) of the Petroleum Act, 1990 (Petroleum Act) vests ownership and control of all petroleum including natural gas Exclusive Economic Zone in the Government.
- The Department of Petroleum Resources (DPR) is presently responsible for regulating both the upstream and downstream sector of the oil and natural gas industry, while the NNPC (through NGC) oversees gas transmission and distribution.
- Key Government initiatives include the Natural Gas Strategy to be implemented by specific legislation for the gas sector: the Downstream Gas Act and the Natural Gas (Fiscal

New Legal Framework and Regulations for Gas Sector

- The Natural Gas Strategy seeks to create a legal and regulatory framework for wholesale competition and multiple distributors with third party access to the gas network.
- Encourage private sector participation.
- Some key features of the Natural Gas Strategy are the establishment of a Gas Commission as an independent regulator for the downstream natural gas sector.
- Regulating the price of gas for local consumption and developing regulations for anti-competitive practices.

New Gas Pricing Policy



The pricing equations reflect the intent of the pricing policy and are dynamic reflecting the peculiarities of each sector

Role of the Domestic Gas Aggregator

- Department of Gas to establish a Domestic Gas Aggregator, in consultation with suppliers of gas in order for the following functions:
 - Implement a Gas Management model through which demand/supply of gas utilization within Nigeria monitored
 - Ensure transparency of dealing between gas suppliers and purchasers;
 - Act as intermediary between suppliers & purchasers of gas in domestic market & ensure supply of gas to strategic sectors in accordance with the approved national gas pricing framework
- Ensure domestic gas demand requirement is achieved through the implementation of Domestic Gas Supply obligation
- Ensure a balance growth of domestic gas project through availability of adequate volume of gas to the strategic sectors. Etc.

Policy on Domestic Gas Demand Requirement

- Every person or company licensed to produce petroleum shall –
- Submit a gas production and supply plan consistent with its obligations under the Domestic Gas Demand Requirement to the Department of Gas
- When required, supply specific volume of gas to purchaser, in accordance a Gas purchase order issued by the Domestic Gas Aggregator
- Pay compensation to any purchaser for any losses suffered as a result of default to supply gas in accordance with the order of the Domestic Gas Aggregator.

Penalties for Non-compliance with Gas Obligation

- Supplier who does not comply with its Domestic Gas Supply Obligations as specified by the Department of Gas shall –
- Pay for the volumes not supplied base on the take or pay provisions of the executed GSPA or as a price of US\$3.50/ MScf which ever is higher.
- Not supply gas to any export project in addition to any other penalties that the Minister may deem fit.

Way forward

Current and immediate activities

- Government provided 1 billion dollars dedicated gas utilisation in 2008
- Short term Gas supply plan consisting of low hanging fruits being implemented
 - NNPC and Industry have coordinating and monitoring committees in place
- Gas quality improvement being pursued
 - Plant upgrade
 - Pigging to rid lines of liquids
- Future gas into the system to be of a higher quality specification
- New Oben Ajaokuta pipeline to be completed before end 2008
- Working with communities to improve security

Way forward (2)

Implementation of Gas Master Plan

- Priority for domestic supply over all other demands
- Approved and Gazetted
 - Gas Pricing
 - Regulation and Gas Supply obligation
 - Blue print Infrastructure need to be publicized
- Hon Minister already issued Gas Supply Obligations requirements to producing oil companies need to be followed up and implemented
- Preparation for formalization of interests and identification of investors in progress to be expedited
- Privatisation of the Industry

Way forward (3)

Adequate coordination of activities among various stakeholders

- NERC, NNPC and its subsidiaries and JV partners, PHCN, Ministry of Energy, Ministry of Finance, e.t.c.
- Signature of gas purchase agreements
 - Gas supply agreements must be in place at the time of commencement of power plants planning
- Continued funding to be provided for gas supply systems and power projects implementation
- Adequate feasibility studies before commencement of projects
- Securitisation of gas supply sources to be in place to ensure continuance of the implementation of these projects pending achievement of market control of the business

THANK YOU

