



The Gulf of Guinea: Nigeria's Gas Master Plan and Opportunities for Development of Gas Infrastructure

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GOG¹⁶
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OUTLINE OF PRESENTATION



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- Energy Usage in the GOG
- Nigeria's Development Agenda
- Evolution of Gas Utilization in Nigeria
- The Nigeria's Gas Master Plan (GMP)
- Key Objectives of the GMP
- Gas Infrastructure Blue Print
- Gas Pricing Policy

OUTLINE OF PRESENTATION (Cont'd)



- **Key Elements of Obligation Regulations**
- **Gas Revolution and Potentials**
- **Nigeria's Gas Potentials**
- **Implementation of the GMP**
- **Opportunities for Regional Gas Development in the GOG**
- **Investment Opportunities in Gas Related Businesses in Nigeria**
- **The Petroleum Industry Bill**
- **Challenges**
- **Conclusion**

INTRODUCTION



- A delight to be invited to the Conference to share our thoughts on developments in Nigeria's Oil and Gas sub-sector.
- A great opportunity for us in the GOG to exchange ideas on how we can collaboratively optimise the use of our Gas resources through a Gas Master Plan.
- The theme of the Conference: Optimising Gas Resources in the GOG is apt.
- New technologies are unlocking new sources of energy as never before.
- Natural Gas is becoming one of the most environmentally preferred sources.

GULF OF GUINEA (GOG) AND GAS RESOURCE ENDOWMENT

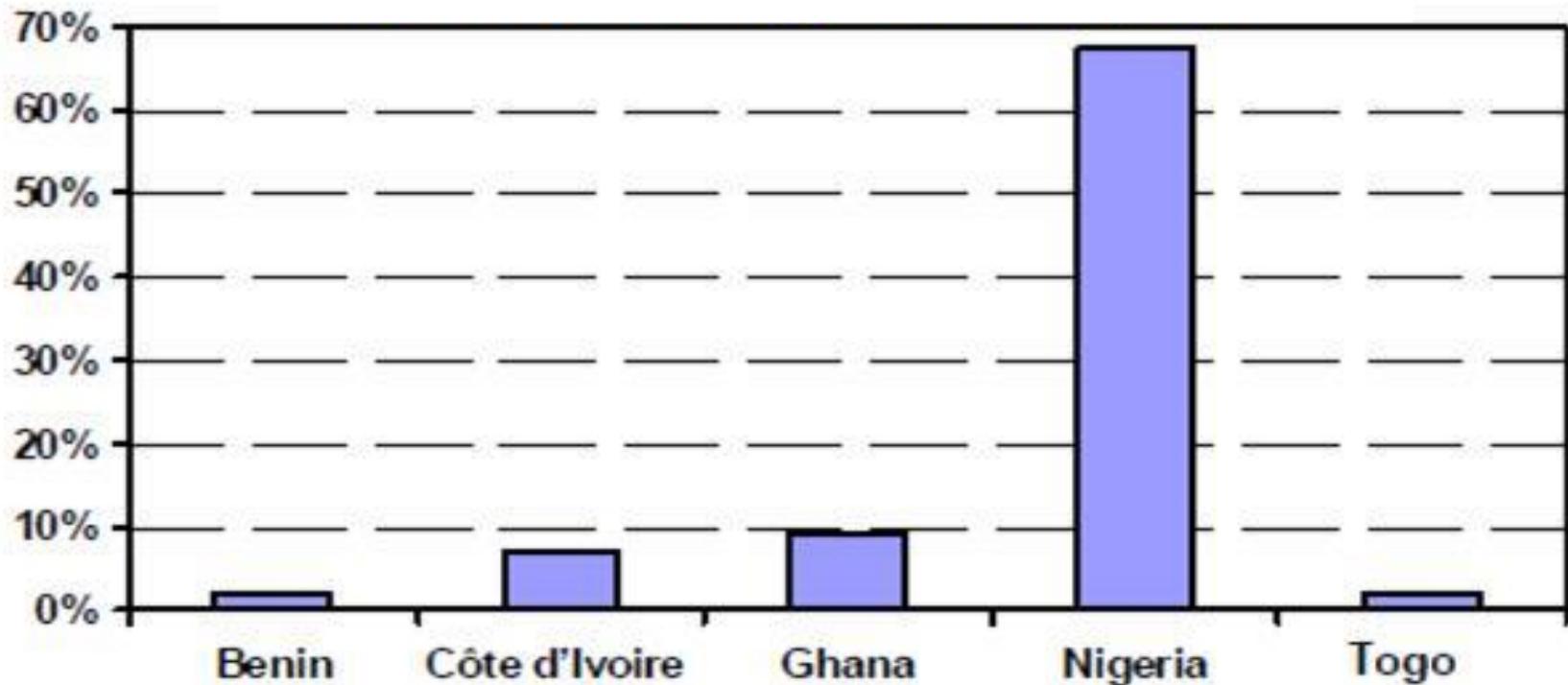


- Gulf of Guinea countries with population in excess of 220m people
- Proven gas reserves of over 220 tcf in the region with Nigeria providing 187 tcf (85%)
- Region supplies about 25% of global energy needs
- Yet, barely 40% of the population consume a meager 150kwh average electricity per capita
- Only Nigeria has considerably developed resources to meet domestic consumption
- Nigeria utilizes about 70% of the gas resource in the region

ENERGY USAGE IN THE GOG



Share of Selected Countries Energy Consumption (%)



EIA, www.themixoilandwater.com

NIGERIA'S DEVELOPMENT AGENDA



■ This is anchored on

- i) **Nigeria's Vision 20:2020**
- ii) **National Implementation Plan (2010 – 2013)**
- iii) **The Transformation Agenda (2010 – 2015)**
- iv) **Nigeria's Integrated Infrastructure Master Plan 2013 - 2043 (embodying the Gas Master Plan)**

EVOLUTION OF GAS UTILIZATION IN NIGERIA



- The evolution is phased.
- Phase I:
 - Pre 1999: Demand Constraint
 - Intense Gas flaring
 - Fiscal incentives to stimulate demand
 - Focused on export (LNG)
 - Fiscal incentives with no legal framework to regulate activities in the sub-sector
- Phase II:
 - 1999 – 2005 The NLNG Era
 - Start of LNG
 - Decline in gas flaring

EVOLUTION OF GAS UTILIZATION IN NIGERIA



■ Phase II (contd.)

- Initiation of new gas related export projects –
Gas to Liquid (GTL)
- Consolidation of fiscal & legal framework
regime

■ Phase III: Post 2005 – Demand Boom/Supply Constraint Era

- Increase demand (both external and internal)
- Shift from demand to supply constraint
- Birth of the Gas Master Plan

THE NIGERIA'S GAS MASTER PLAN



- Evolve in response to increased demand for gas and the consequential need for a legal framework to regulate actors in the sub-sector.
- A guide for commercial exploitation and management of Nigeria's gas sub-sector
- Aim to reposition Nigeria as the regional gas supply hub.

KEY OBJECTIVES OF THE GMP



- Maximizing the multiplier effect of gas in the domestic economy (power, fertilizer, domestic LPG, methanol etc)
- Optimize Nigeria's share and competitiveness in high value export markets
- Assure long term gas energy security for Nigeria
- Local content development

THE GAS INFRASTRUCTURE BLUE PRINT



- **Developed to further the implementation of the GMP**
- **Aims to:**
 - **reduce gas infrastructure cost by providing a connectivity among resource sources and demand centres**
 - **guide further investment in the sub-sector**
 - **provide a roadmap for the gradual consumption increase in domestic and regional markets**
 - **introduce a pricing policy to create a structure and transparent framework for price determination at any point in time.**

GAS PRICING POLICY



- As a framework, domestic market is grouped into three categories
 - Residential and light commercial users
 - Industrial users – feedstock users
 - Commercial users – industrial fuel
- This forms the basis for price determination
- The policy provides for the establishment of a Strategic Gas Aggregator (SGA) Company to manage demand and supply
- Domestic gas supply obligator to regulate domestic gas supply to the segregated users and ensure the enforcement of supply contracts entered into, with penalties for defaults and flaring.

KEY ELEMENTS OF OBLIGATION REGULATION



- Sets a limit for gas reserve for domestic use
- Empowers the Minister of Petroleum to pronounce the limit for IOCs for a period between 5 – 7 years.
- Mandate oil and gas producers to comply
- Provides for the establishment of a Gas Department in the NNPC.

THE GAS REVOLUTION AND POTENTIALS



- Aim to harness Nigeria's proven gas reserve of 187 tcf and the underscored potential of 600 tcf to attract foreign direct investment.
- Monetization of gas reserve and reduction/stoppage of gas flaring
- Raising domestic gas supply from 1 million cubic feet per day to 10mcf/d to satisfy local demand for power generation
- Promote gas based industrialization

NIGERIA'S GAS POTENTIALS



- Potential put at 187 tcf, reserve of 600 tcf and ranked 8th national gas reserve holder in the world (US EIA)
- Holds 2.8% of global production
- Gas flaring caused by low domestic demand and lack of gas supply infrastructure
- Loss of US\$2 to 2.5 billion in potential revenue due to flaring.

IMPLEMENTATION OF THE GMP



- Increase the potentials for domestic consumption – Power Plants
- The establishment of the West African Pipeline Project to supply Gas to neighbouring countries
- Currently, supply Cotonou (Benin), Lome (Togo) and Tema (Ghana)
- The Trans-Sahara Gas Pipeline Project to supply gas to Europe through Algeria in North Africa
- Proposed network to supply gas to Equatorial Guinea
- Core investors invited through advert, 50 applied, 15 shortlisted. An indication of confidence and expected boom

INVESTMENT OPPORTUNITIES FOR GAS IN NIGERIA



- **Domestic Gas Supply, Industrial and Commercial use abound within the Value Chain.**
- **Power Generation – 15 Power plants requiring gas to generate electricity**
- **Financial Services, Gas Transmission Pipelines, Pipe Milling, Fabrication Yards**
- **Upstream Gas Development, LNG, LPG Gas Processing Facilities/Gas Based Manufacturers – Fertilizers**
- **Independent Power Plants etc**

OPPORTUNITIES FOR REGIONAL GAS DEVELOPMENT IN THE GOG



The structure of the West African Gas Pipeline and the Trans-Saharan Gas Pipeline are potential platforms for investment viz:

- **Robust PPP framework;**
- **Capacity for expansion;**
- **Favourable current market forecast;**
- **Capacity to enlarge and extend membership;**
- **Closer cooperation, integration and a significant income and employment to transit countries**
- **Strengthening the security of pipelines and other installations; etc**

PETROLEUM INDUSTRY BILL



- A legislation that is intended to further coordinate incentives for investors
- Encourage accelerated gas development projects in all ramifications
- Protect investors (foreign and local), government and the local communities that are impacted by exploration activities.

CHALLENGES



- **The gas market, as it is in Nigeria, is oligopolistic, controlled by few.**
- **Absence of gas distribution infrastructure**
- **Appropriate legal framework to protect potential investors and gas related transaction (though being addressed)**
- **Outstanding debt obligation and revenue securitisation**
- **Investment outlay of \$150 billion to turn around the sub-sector cannot be met by government alone. The private sector has a role to play.**

CONCLUSION



- **The institutional and legal framework are being put in place to create an enabling environment**
- **Nigeria's ratings by international rating agencies have improved, showing a favourable investment climate**
- **50 investors showed interest in investing in Nigeria's gas sub-sector, only 15 chosen for now. Opportunities therefore exist for willing investors.**
- **The forum provides a better place to tell our story. Therefore, willing investors are welcome to Nigeria.**



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