



The Nigerian Gas Master-Plan Status Update

By

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January 2009

CONTENT



- **Introduction**
- **The Gas Master-Plan Overview**
- **Status Update**
- **Summary of Outstanding Issues and Next Steps**
- **Conclusion**

INTRODUCTION

Evolution of NNPC's Involvement in the NGMP



- Fmr. President directed NNPC to resolve gas supply shortage to planned NIPP power plants
- NNPC led an industry-wide effort allocating gas supply to IOC's etc.
- Evident gas supply challenge beyond adhoc intervention
- NNPC conceived the need for a full gas master-plan and led the effort
- Recently, NNPC effort positioned as back-office support for the MoE in entrenching the master-plan policy
- NNPC involvement going forward in 2 parts
 - Entrench the GMP through the FMoE
 - Develop and execute a corporate gas strategy leveraging the GMP to actualize an aggressive gas business

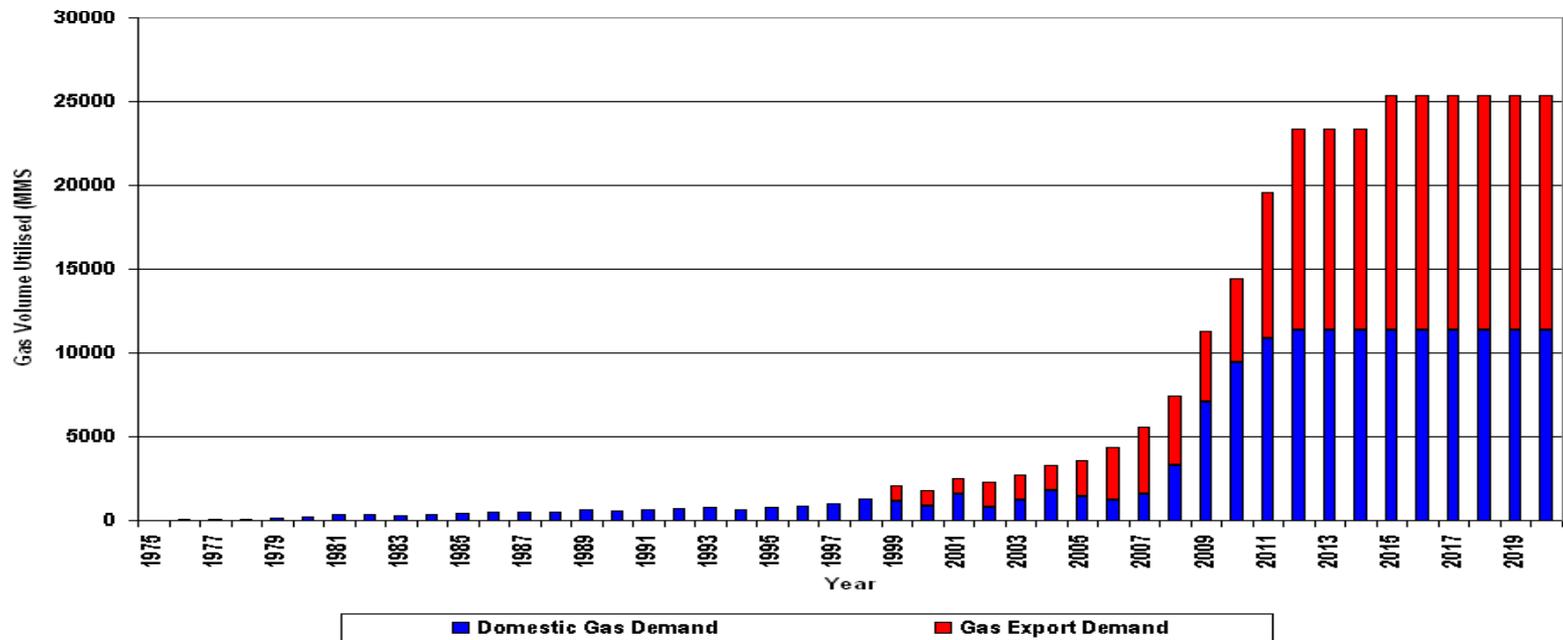
NNPC's involvement evolved from an adhoc intervention in gas supply to NIPP through to the full development of the gas master-plan and now to the development of a focused gas strategy for NNPC

INTRODUCTION

Unprecedented Growth In Potential Demand



Nigeria's Historical Gas Utilization and Forecast Potential Demand



Unprecedented growth in gas demand, not matched by growth in gas supply threatened the economic aspiration of the country and prompted the immediate development of the NGMP

INTRODUCTION

Challenges of Supply



1. Oligopolistic structure of the gas sector in Nigeria

- Few dominant gas suppliers
- These gas suppliers are vertically integrated across the value chain with a strong export LNG bias
- Increasing tendency towards market power abuse

2. Poor commercial framework for the Domestic gas market

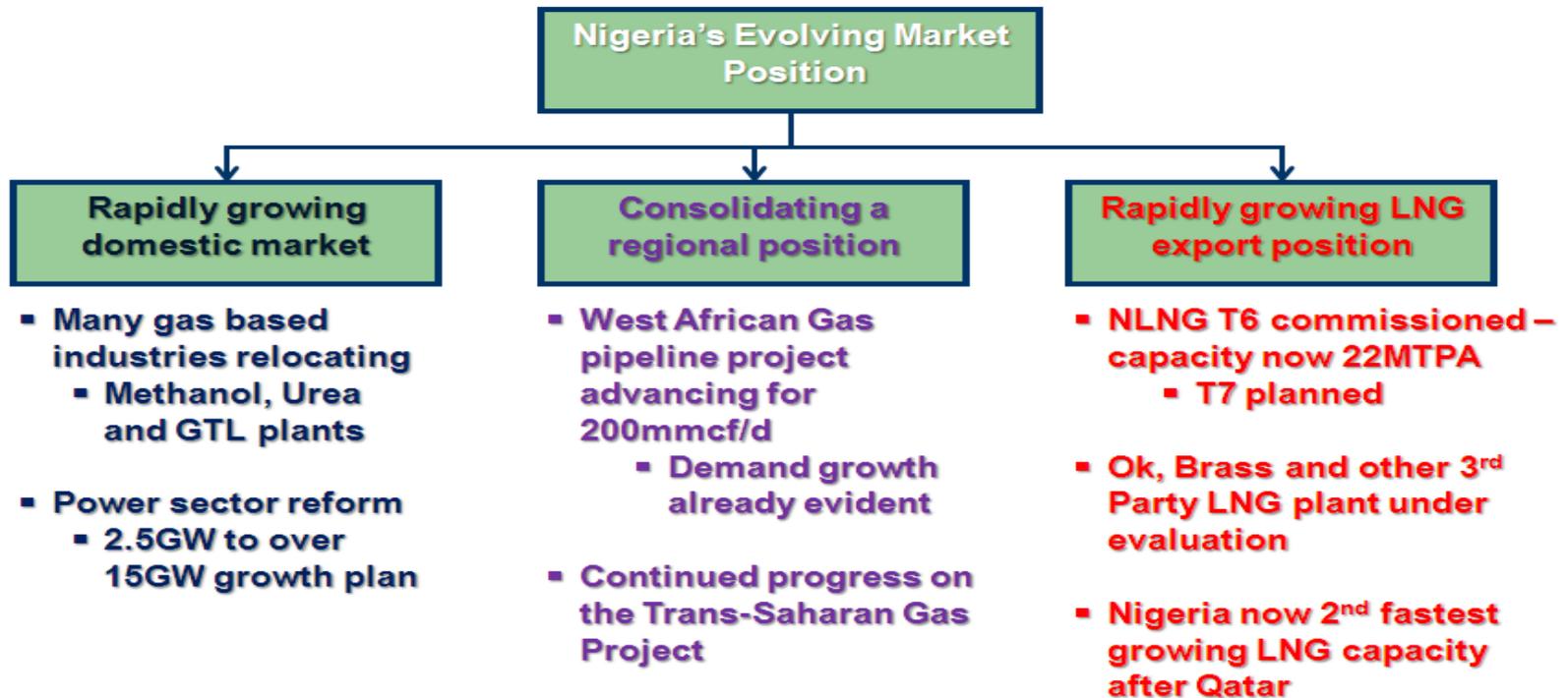
- Unprecedented growth in the domestic market, but market has a history of sub-commerciality – low gas price
- No bankable gas supply agreement framework, hence unable to support institutional investment in capital intensive projects for supply
- History of poor revenue collection

3. Inadequate Infrastructure

- Gas infrastructure is project based and does not support flexibility of supply – visible absence of grid structure and its attendant benefits
- Infrastructure not scaleable enough to support the concurrent growth and pace anticipated for Nigerian gas

INTRODUCTION

Robust Market Potential



Underpinning the demand growth is a very robust and diverse market potential for Nigerian gas. For rapid economic growth, it is essential that a framework that supports the concurrent realization of this market potential be developed. This formed the theme for the NGMP

CONTENT

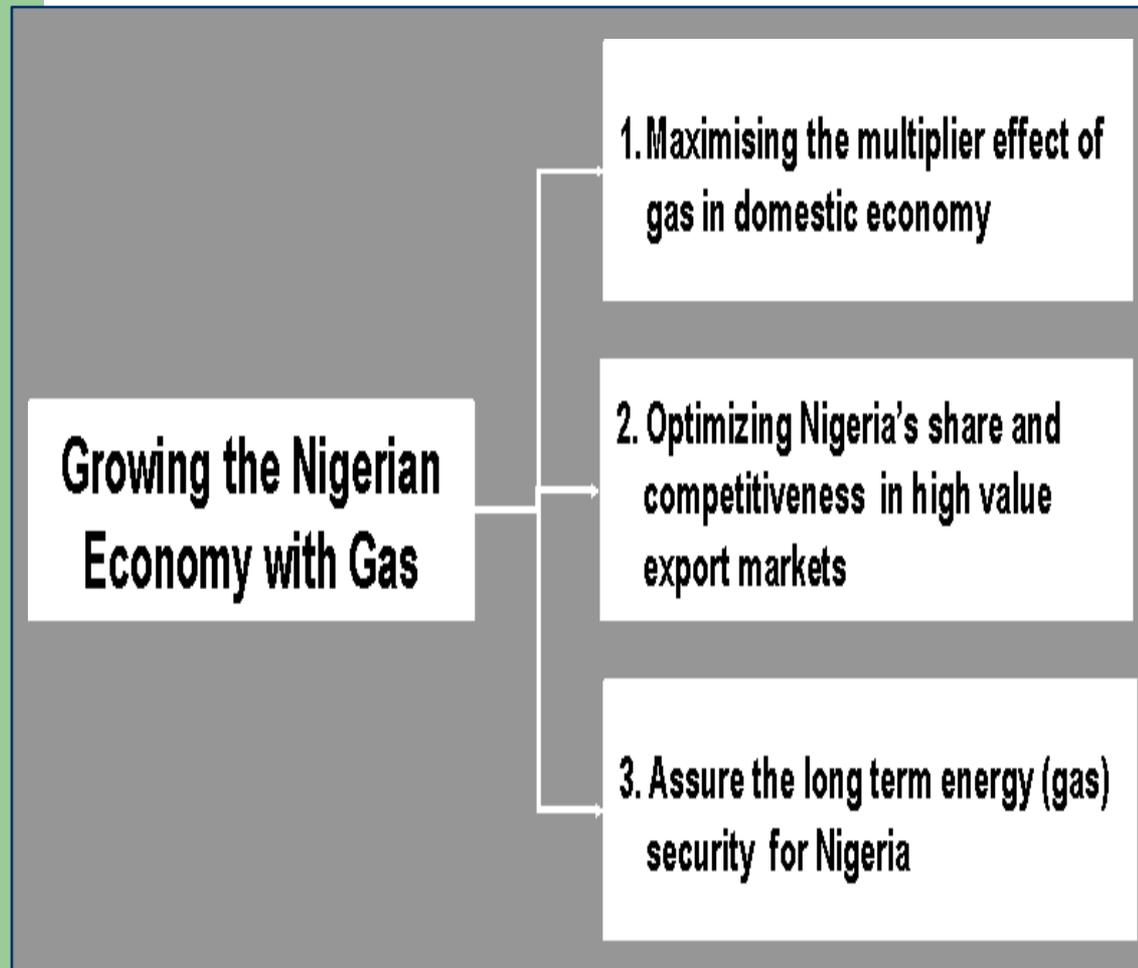


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GMP Status Update

Objectives of the Nigerian Gas Master-Plan



- Facilitate gas to Power
- Domestic LPG & CNG
- Stimulate broad gas based industrialization – methanol, fertilizer etc.



- Selective participation in high value markets
- Strategic positioning for growth



- Balancing trans-generational needs – managed exploitation

INTRODUCTION

The Gas Master-plan – 4 Step Agenda



Feb. '08

Step 1 :
Intervention –
Kick Start Viable
Domestic Market

Jan. '11

Step 2 :
Attain Full
Commerciality in
Domestic Market

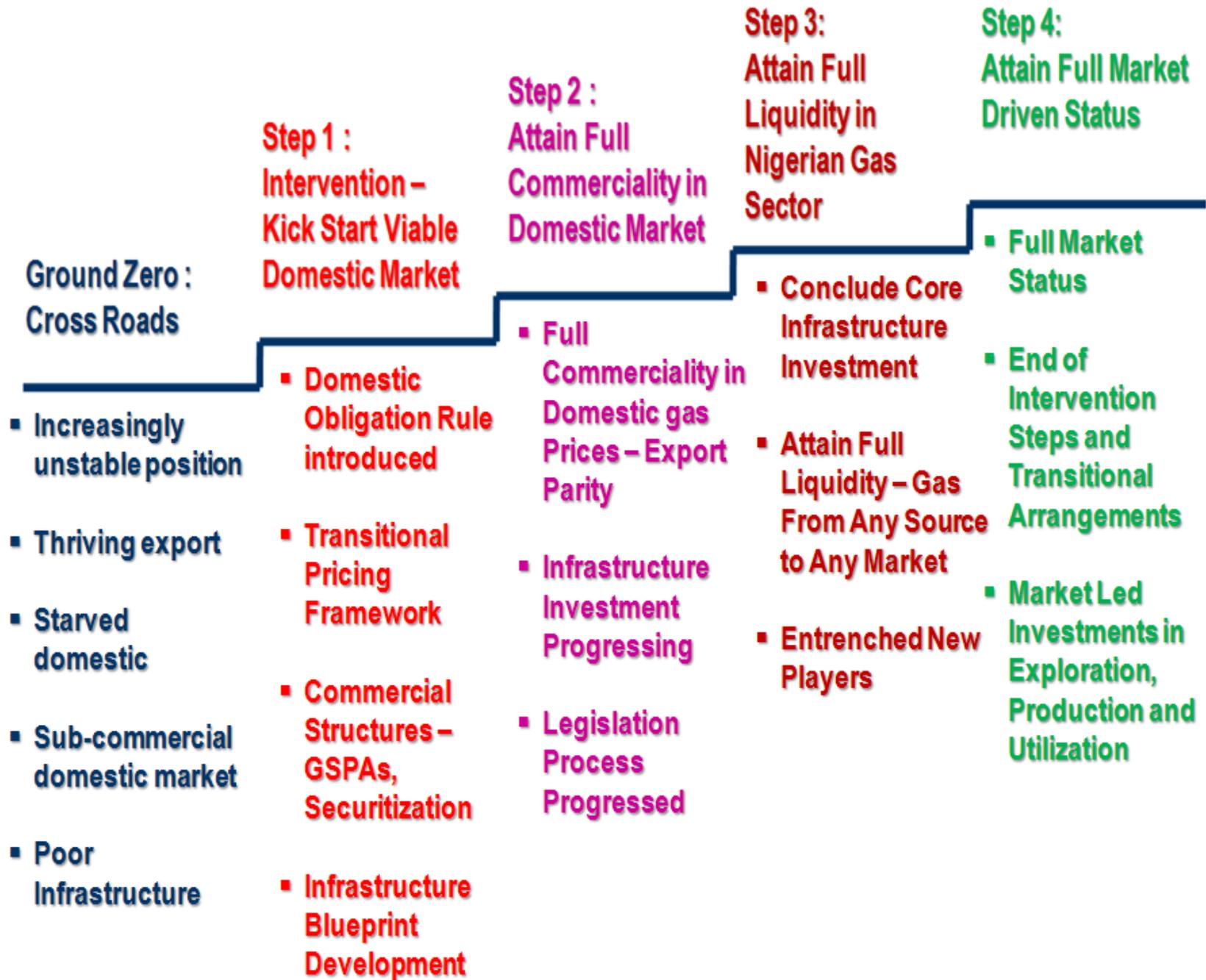
Jan. '13

Step 3:
Attain Full
Liquidity in
Nigerian Gas
Sector

Jan. '14

Step 4:
Attain Full Market
Driven Status

Ground Zero :
Cross Roads



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STATUS UPDATE

[1] Domestic Gas Supply Obligation Regulation



- Regulation Developed and Approved by FEC
 - Mandates all gas producers to set aside a certain production level for domestic gas market
 - HMPR to determine obligation level on a periodic basis (5yrs) and also determine if need for obligation should continue
 - Penalty for non-compliance set at \$3.50/mcf of obligation not supplied
- First obligations have been issued for period 2008-2013
- Critical outstanding issue is the delay in circulation of the gazetted regulation
 - **HMPR's intervention is urgently requested for the regulation to be published by the MoJ**

STATUS UPDATE

[2] Short Term Gas Supply (Now to Q4 09)



Step 1: Stabilize and Accelerate Target : 415mmcf/d and 1.4GW by end Q1 09

- Expedite repair of ELPS A (Escarvos-Warri Line)
- Investigate possibility of emergency lease gas processing plants to arrest quality problem
- Expedite delivery of additional 70mmcf/d at Utorogu
- Expedite delivery of PanOcean 65mmcf/d
- Ensure full commissioning of Afam VI and Okoloma Gas Plant

Step 2: Focused Expansion of Existing Plants

Target : 850mmcf/d extra and 3GW additional by end 09

- Expedite looping of ELPS A line for 2009 delivery
- Investigate and execute backflow line from OGGS into ELPS.
- Deliver Utorogu to 360mmcf/d
- Expand Oben to 150mmcf/d
- Expand Ughelli to 120mmcf/d
- Address security issue and re-enter Odidi – 60mmcf/d
- Ensure delivery of ExxonMobil 100mmcf/d into Bonny.
- Expedite delivery of Chevron EGP3a for additional 300mmcf/d

Step 3: Medium Term DSo Target : 4500mmcf/d and 12GW Post 09 (2012)

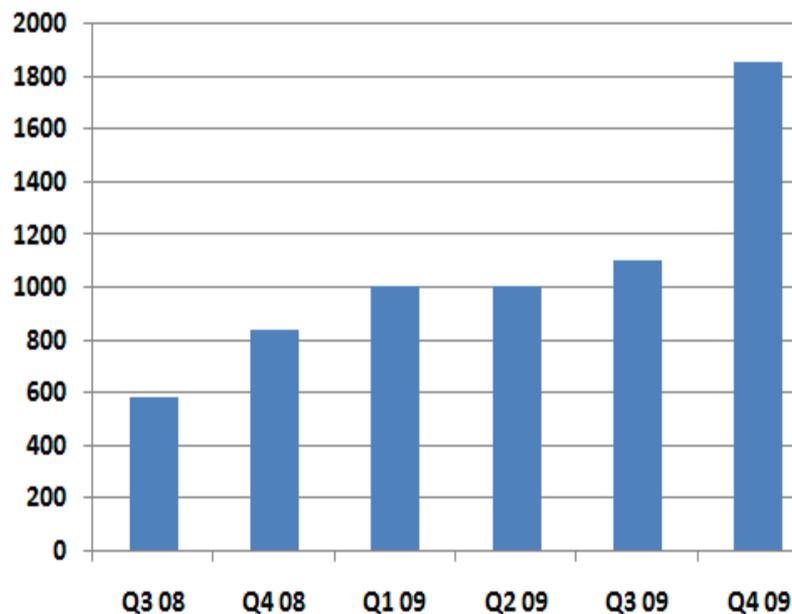
- Mandatory delivery of domestic gas supply obligation plan for other 2009 projects
- Mandatory supply plans for post 2009 domestic supply obligation
- Execution of gas master-plan infrastructure blueprint investor process
- Delivery of critical Gas transmission lines :
 - Ob/Ob – Oben
 - Calabar – Umuahia – Kano



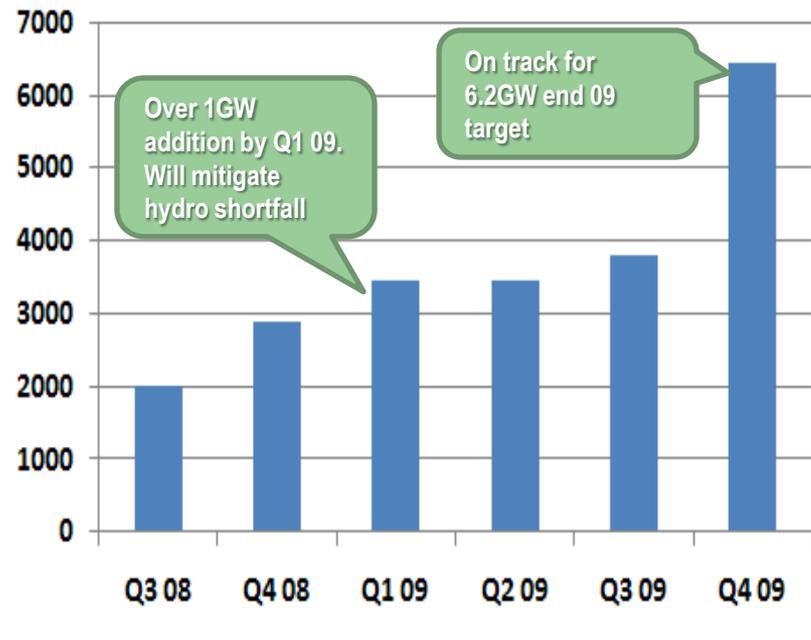
STATUS UPDATE

Short Term Gas Supply – Forecast Impact on Power

Total Domestic Gas Supply Forecast



Equivalent Generating Capacity (MW)

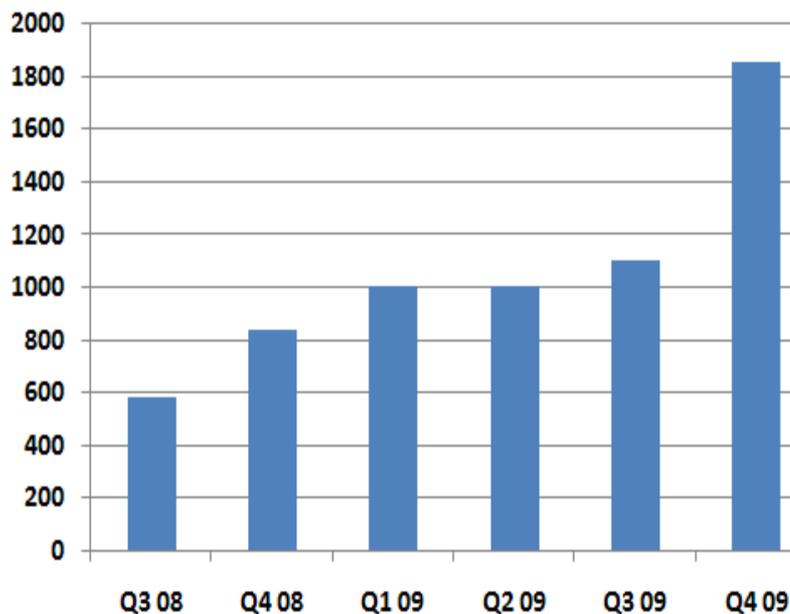




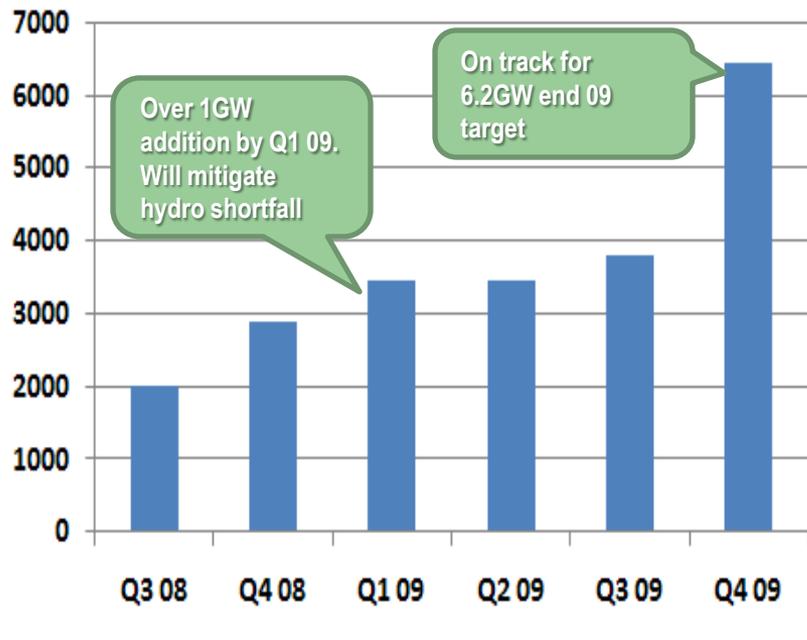
STATUS UPDATE

Short Term Gas Supply – Actual Vs Planned Impact

Total Domestic Gas Supply Forecast



Equivalent Generating Capacity (MW)





STATUS UPDATE

[3] Medium/Long Term Gas Supply Obligation

GAS PRODUCERS	2008	2009	2010	2011	2012	2013
SPDC	850	1100	1364	1559	1753	1948
CHEVRON	351	455	563	644	724	805
MOBIL	399	517	640	732	823	915
NAOC	280	363	450	514	579	643
ELF	182	235	292	333	375	417
NPDC	45	120	120	120	120	120
ADDAX	70	140	140	140	144	160
POOC	65	65	65	65	65	65
AMNI	14	19	23	27	30	33
MONI PULO	11	14	18	20	23	25
DUBRI	4	5	6	7	8	9
CONSOLIDATED	1	1	2	2	2	3
CONTINENTAL	3	4	5	5	6	7
NIGER DELTA	1	1	2	2	2	3
TOTAL	2276	3039	3690	4170	4655	5152

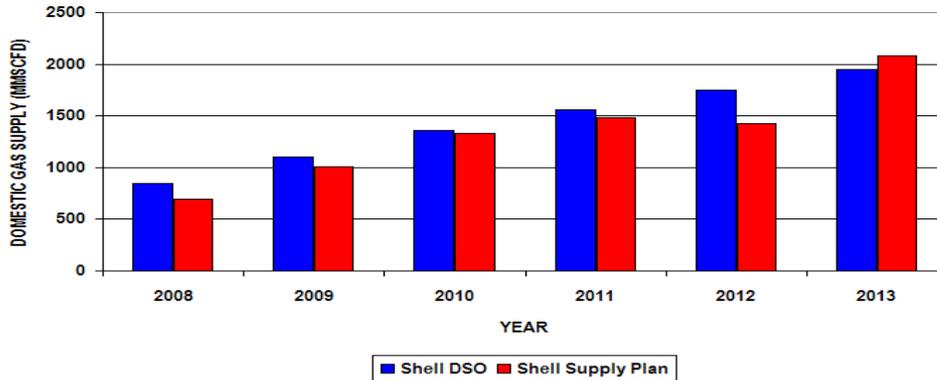
The first DSO have been advised. This aims to put about 5bcf/d of gas into the domestic network by 2013. This is considered the critical mass required to underpin the domestic market

STATUS UPDATE

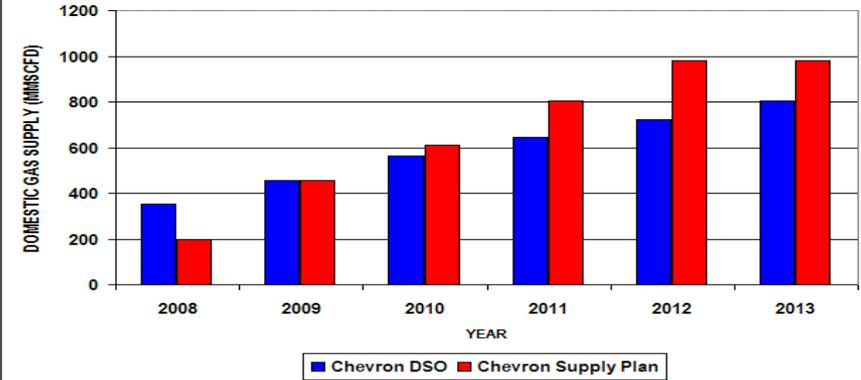
[3] Medium/Long Term Gas Supply Obligation – Performance Update



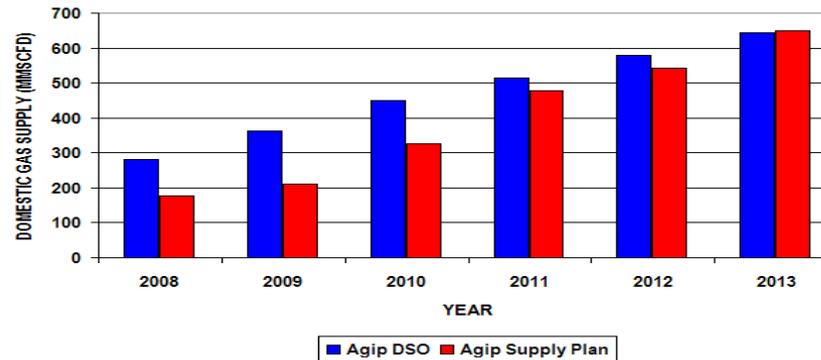
SHELL DOMESTIC SUPPLY PLAN VS OBLIGATION



CHEVRON DOMESTIC SUPPLY PLAN VS OBLIGATION



AGIP DOMESTIC SUPPLY PLAN VS OBLIGATION



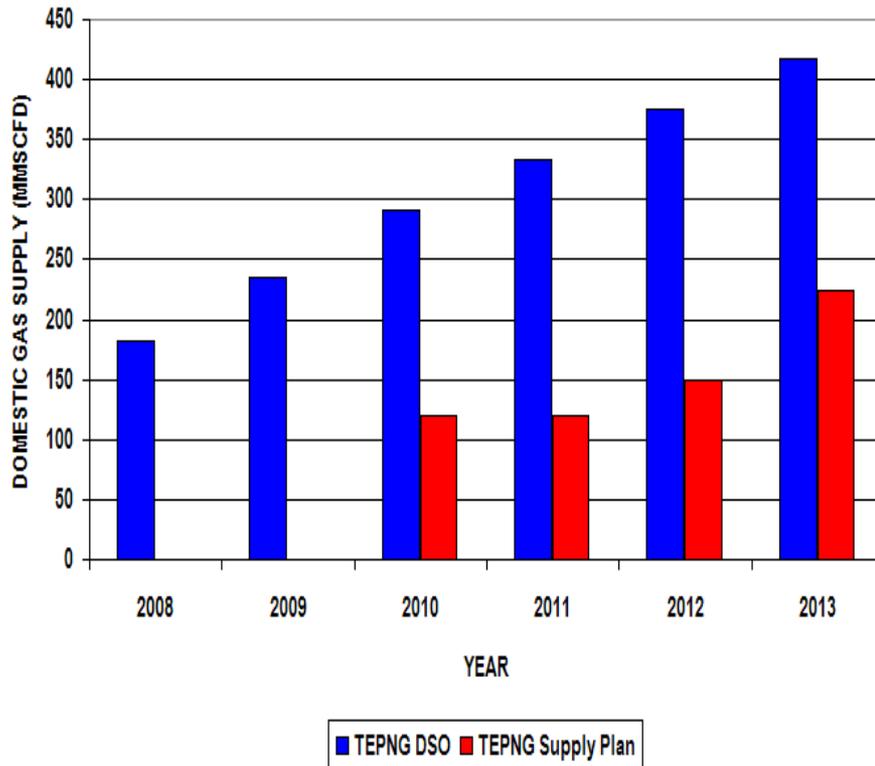
The IOC's have responded with gas supply plans to meet their obligations. ExxonMobil and Total however have not demonstrated the desired level of commitment to the FGN's DSO intention. Both have submitted supply plans far short of level of stipulated by the DSO. Shell, Chevron and Agip have demonstrated more alignment

STATUS UPDATE

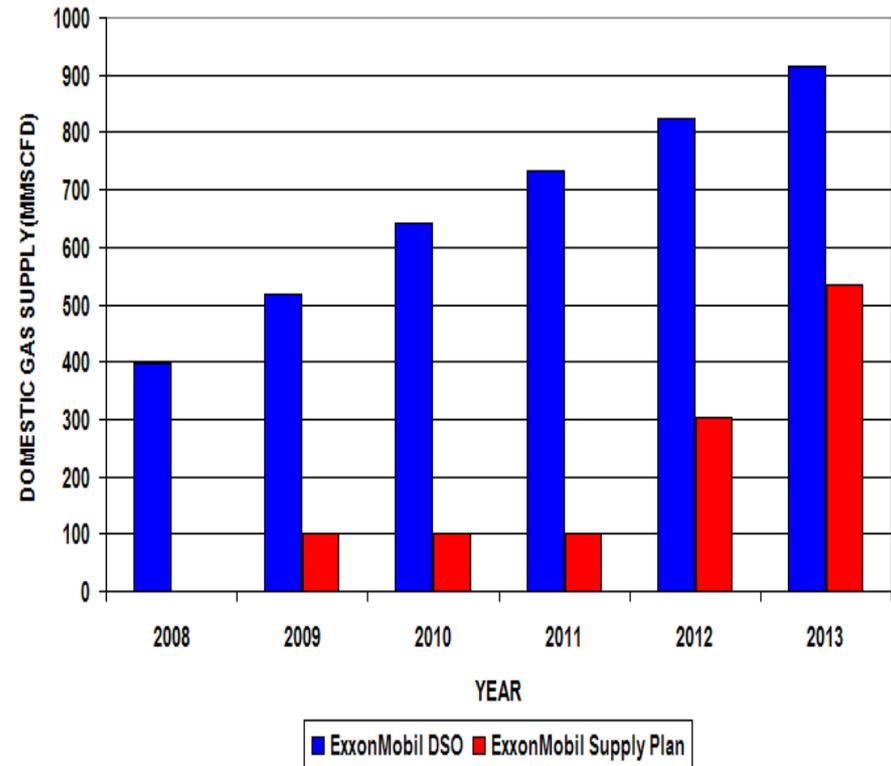
[3] Medium/Long Term Gas Supply Obligation – Performance Update



TEPNG DOMESTIC GAS SUPPLY PLAN VS OBLIGATION



EXXONMOBIL DOMESTIC SUPPLY PLAN VS OBLIGATION



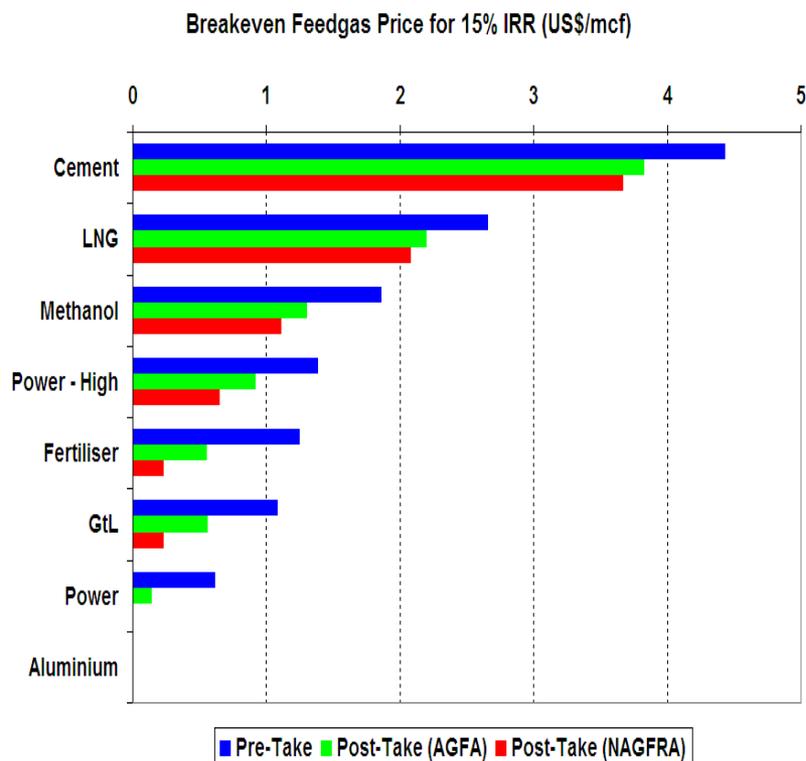
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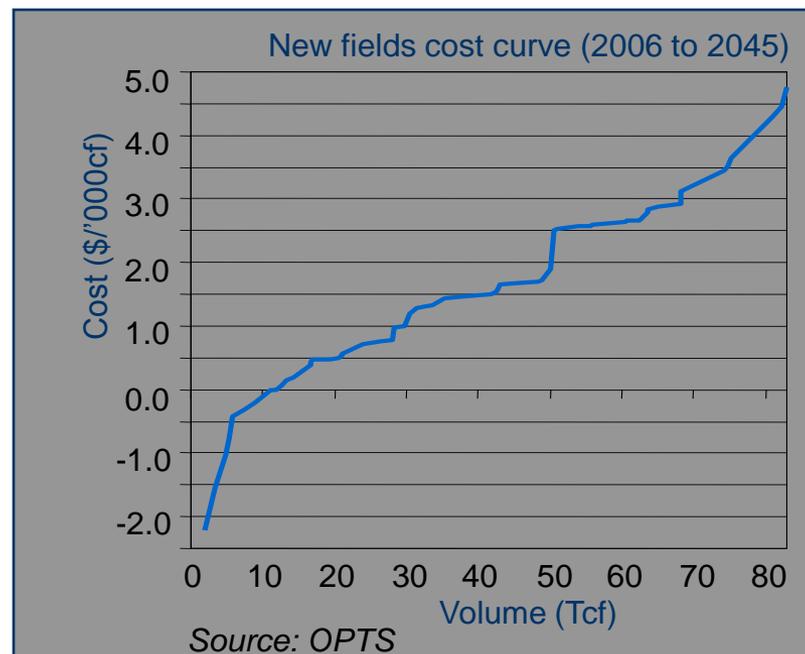
[4] Domestic Gas Pricing – Balancing Affordability with Commerciality of Supply



Sector Affordability



Supply Commerciality



The key challenge in pricing was matching the wide variation in ability to pay with the rising marginal cost of supply of gas

STATUS UPDATE

[4] Pricing Sectors in Policy



Gas Pricing Equations

Strategic Power Sector

- **Cost plus approach**

$$C_p = P_p * [1 + \text{Inflation}]$$

- P_p is the prior year price of dry gas
- A transitional gas pricing is proposed for Power leading to the cost reflective baseline of about \$1/mcf by 2012
- Formula applies thereafter

Strategic Gas Based Industries

- **Netback approach**

$$C_p = NRP * [1 + \text{End Product Factor}]$$

- End product factor is a netback indexation
- EPF defined as $[CM\ PP - PRP]/PRP$
- Indexation ensures that gas price increases proportionately with end product price
- Price capped at \$3/mmbtu

Wholesale/Commercial

- **Alternative Fuels approach**

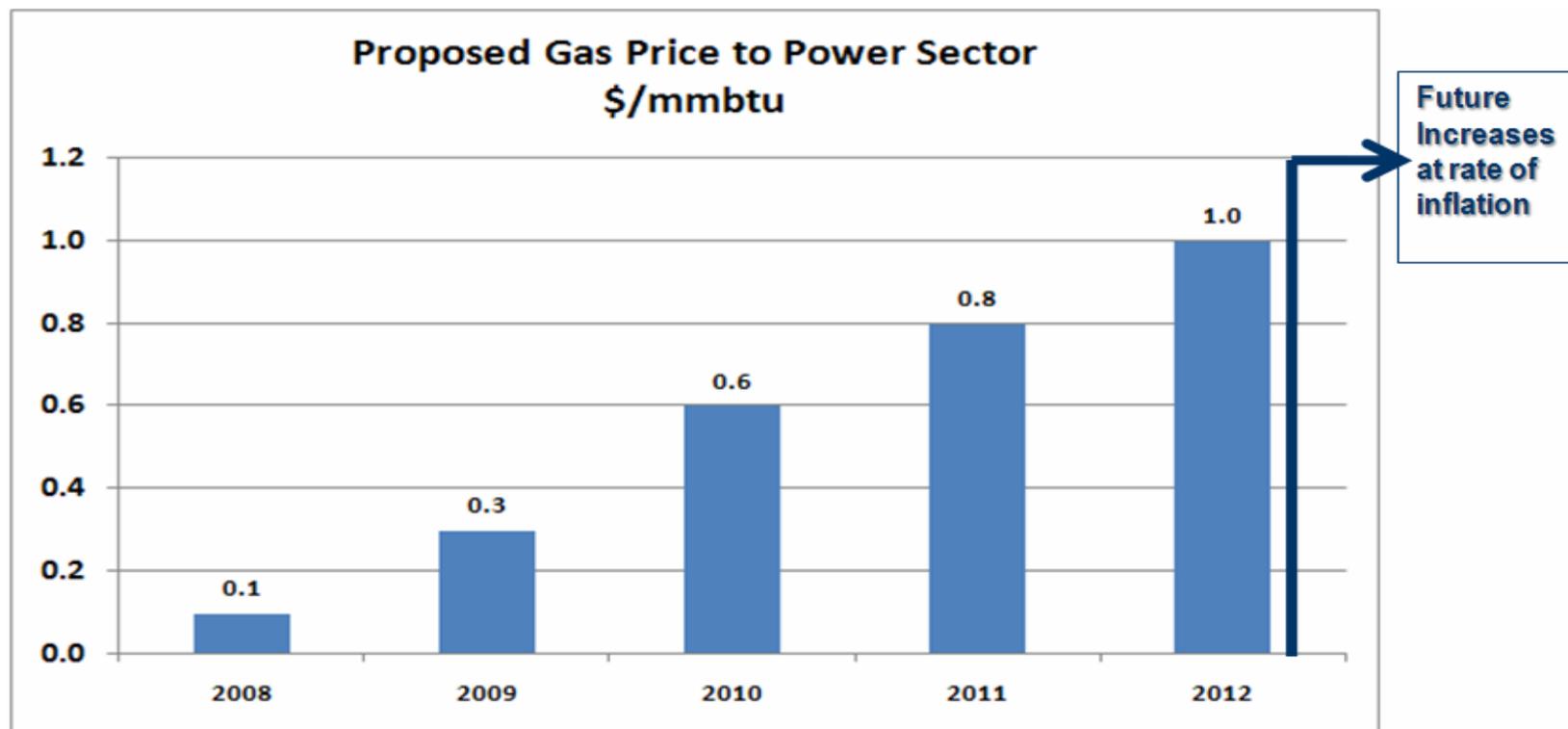
Formula being finalized!

- Pricing linked to LPFO but capped to ensure long run competitiveness of the manufacturing sector

A sector based gas pricing policy has been developed and approved by the FGN. It aims to deliver the broad intent of FGN's economic aspiration whilst delivering export parity in pricing to the supplier by end 2011

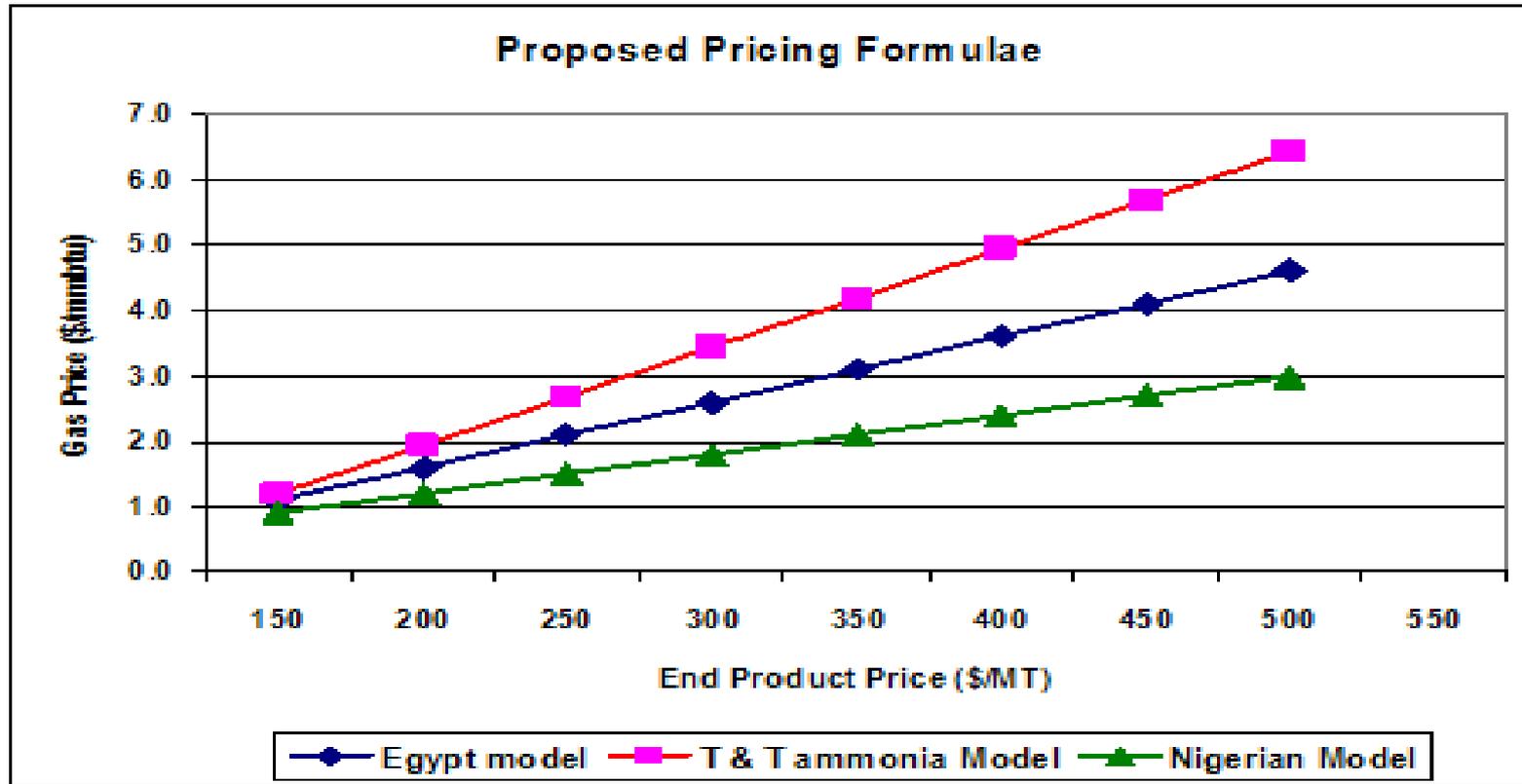


Proposed Gas Price to Power Sector



Power sector pricing aims to ensure that the nation's richest gas are assumed delivered to Power, ensuring the long run cost competitiveness of gas to power. However, it also ensures a steady growth in price to levels that are commercially viable and cost reflective. Price growth has been designed to ensure minimal shock to the consuming public, hence the managed growth to \$1/mcf by 2012

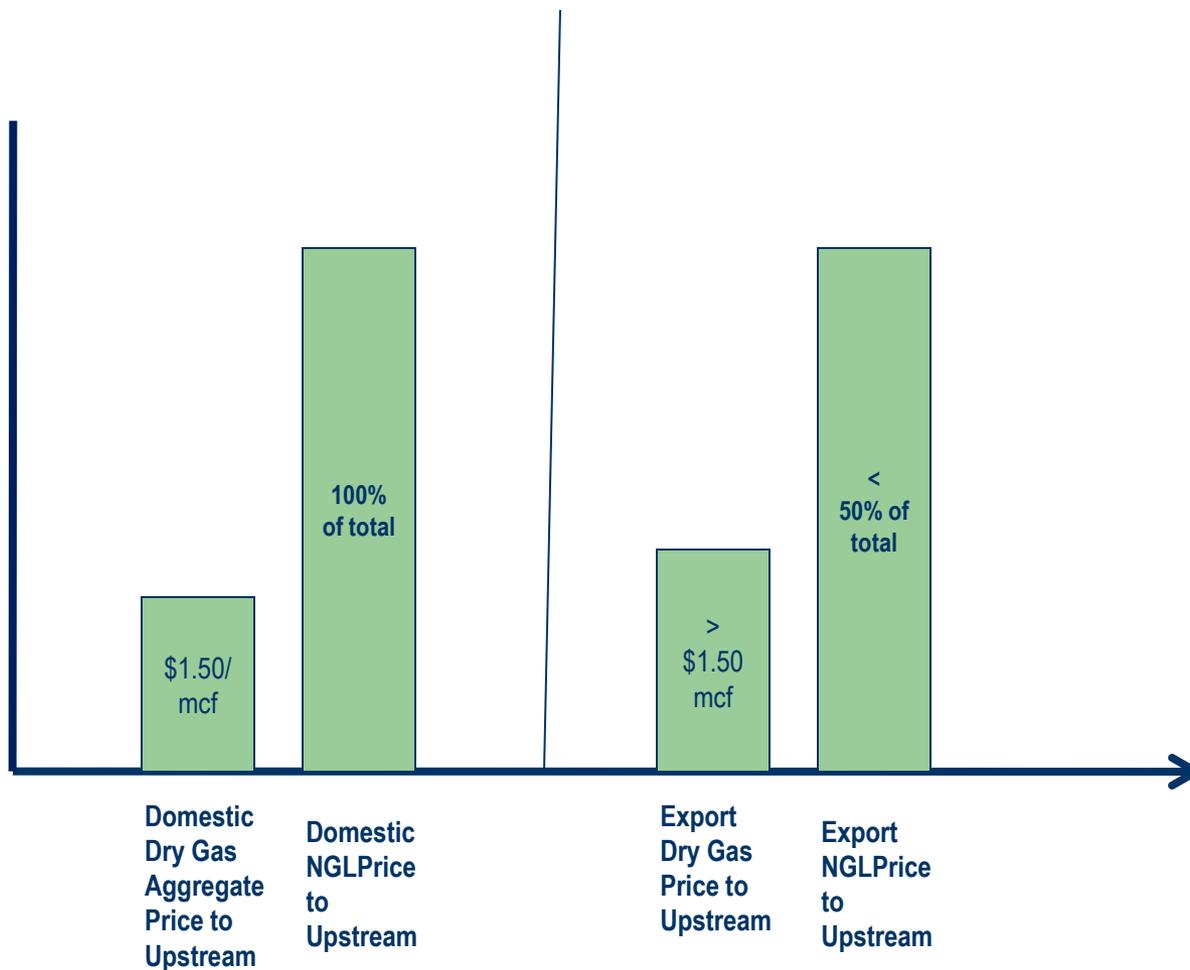
PROPOSED GAS PRICING FORMULA FOR STRATEGIC INDUSTRIAL SECTOR



Objective of gas pricing in this sector is to galvanize Nigeria as the regional hub for gas based industries such as fertilizer, petrochemicals etc. The formula delivers a competitive gas price when compared with rival countries

PROPOSED AGGREGATE GAS PRICING

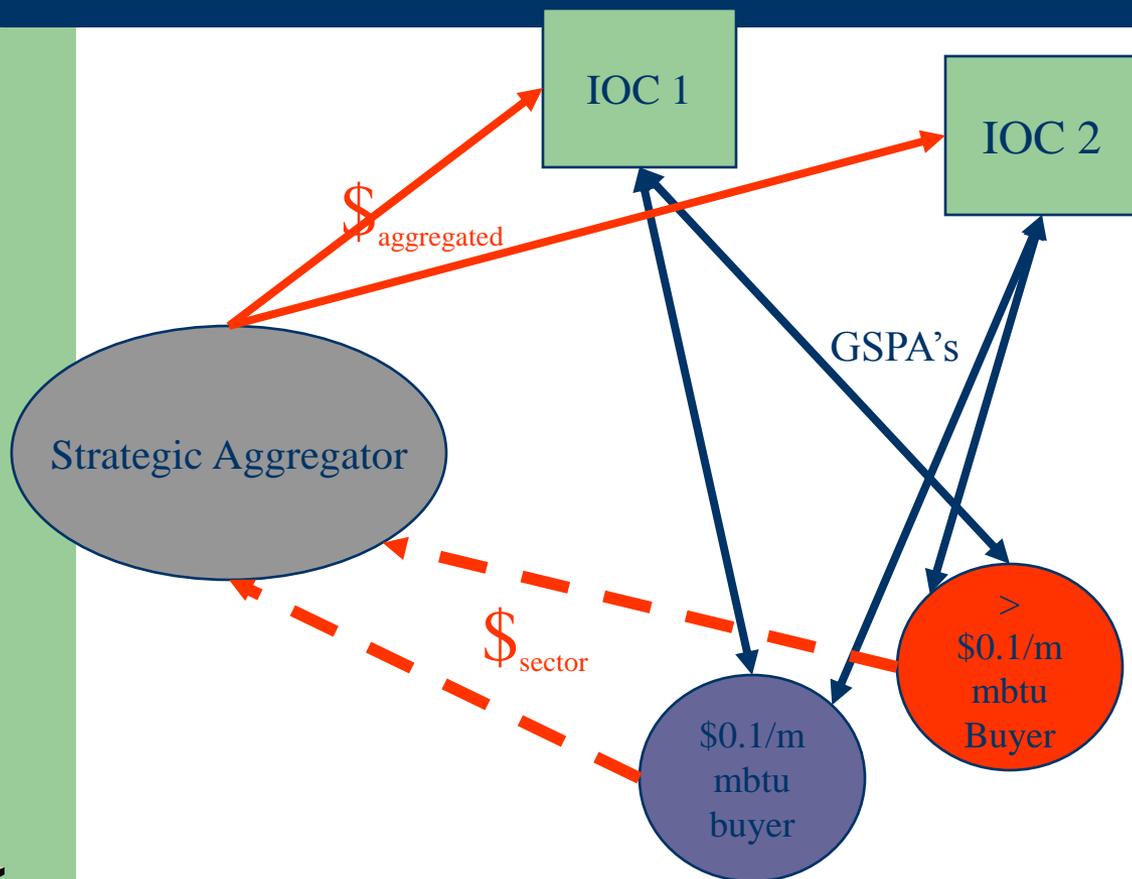
Export Parity by 2012





STATUS UPDATE

The Strategic Aggregator Concept



- SA logs all gas demand requests
- SA plans and aligns gas demand with supply subject to
 - IOC allocation quota
 - Minimum aggregated price target
 - Other logistic consideration
- SA advises IOC's of supply obligation – customer, volume
- IOC and buyer sign GSPA based on framework prices
- Buyer pays into account, SA manages supplier payment on aggregated basis



The pricing policy is premised on the principle of price aggregation across the sectors. There is therefore the need to establish a Strategic Aggregator. The operating model has been developed and approval to establish will be sought from the HMPR shortly

STATUS UPDATE

[5] Template GSPA and Gas Securitization

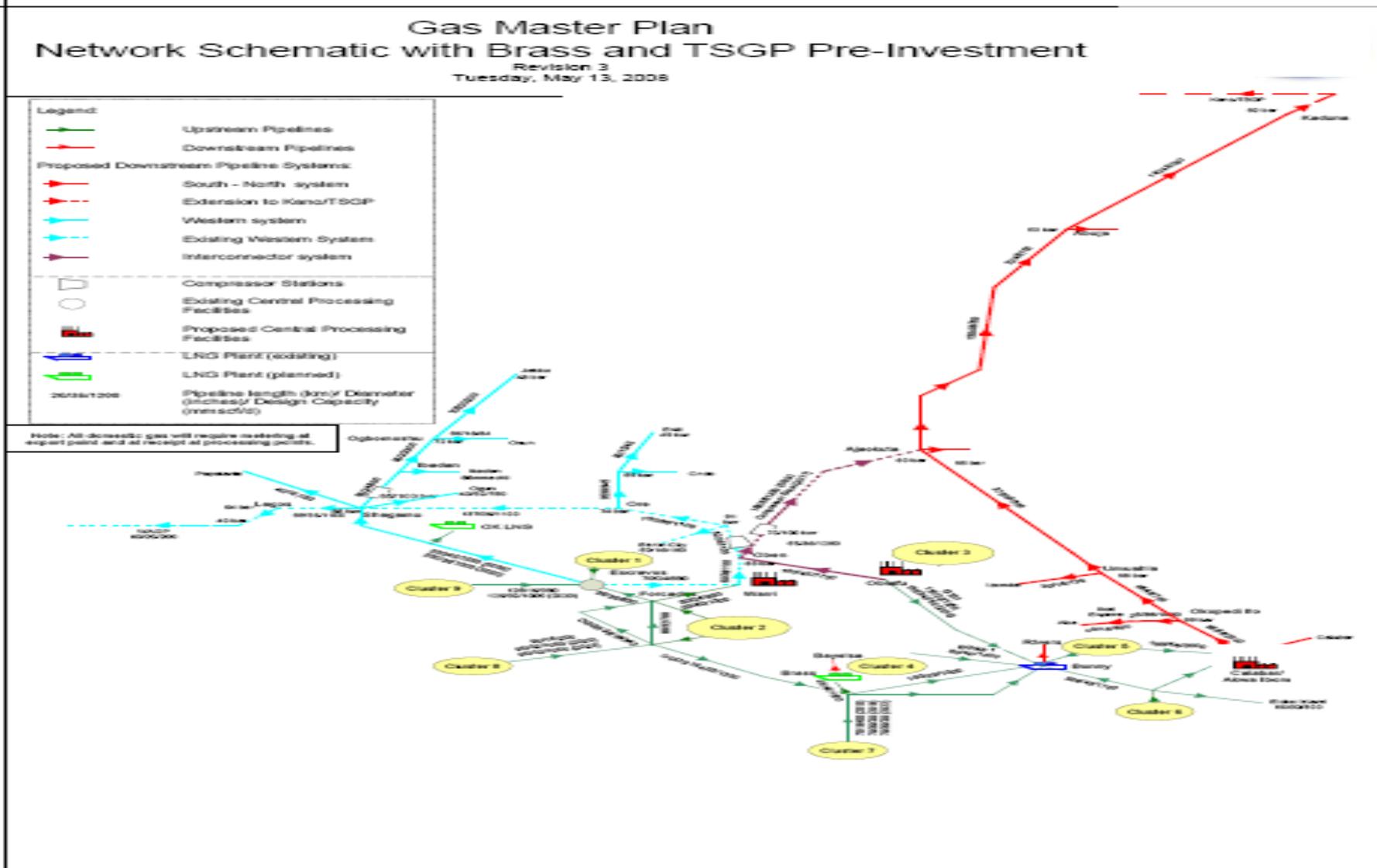


- ❑ **First attempt to establish a world class bankable GSPA and GTA template for the Nigerian domestic market near completion**
 - ❑ **Timeline for completion end January**
 - ❑ **Critical outstanding issues are liability cap for off-spec gas, establishment of gas aggregator**

- ❑ **Securitization of revenues**
 - ❑ **World Bank PRG being developed to securitize revenues for gas supplied to government owned power plants**
 - ❑ **Interim securitization for short term payment – committee setup to investigate MYTO option**

STATUS UPDATE

[6] Gas Infrastructure Blueprint



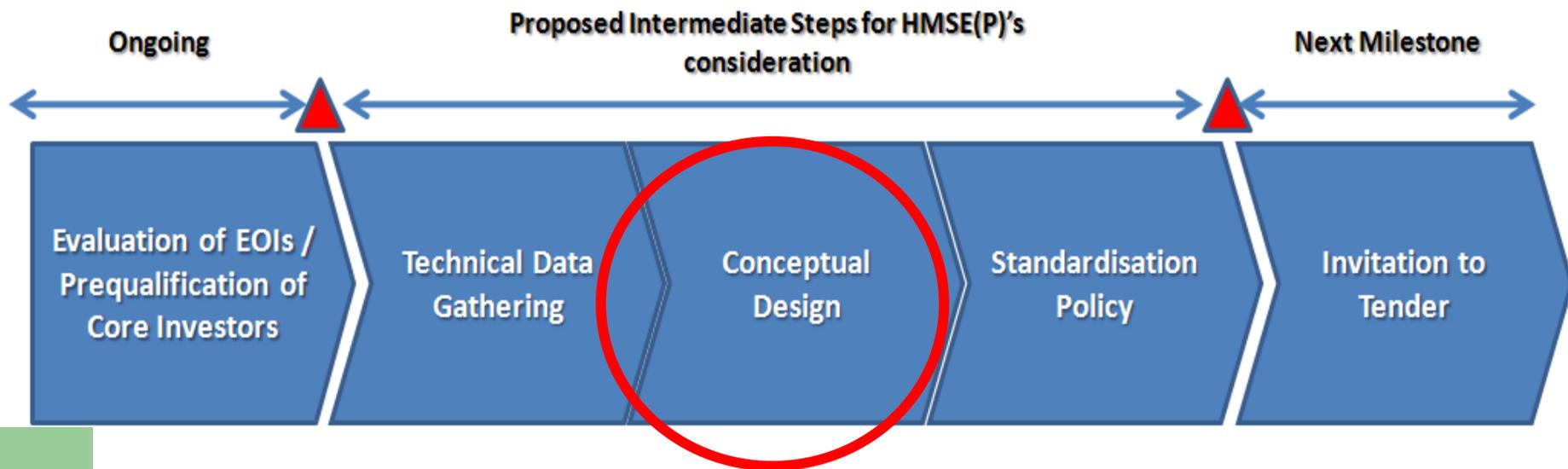
THE GAS INFRASTRUCTURE BLUEPRINT Selection Process



Invitation published in the Financial Times, This Day and Guardian Newspapers of 3rd November. Also on website www.ngmproadshow.com

STATUS UPDATE

[6] Gas Infrastructure Blueprint – Investor Selection



URGENT!!

The next most critical step is the development of a conceptual design ahead of invitation to tender. Approval to engage an engineering firm has been discussed with HMoS(P)

[7] Status Update - NNPC Corporate Gas Strategy Development



(ALL)

(GAZP, CENTRICA, EON, TSGP)

(STATOIL)

(BG, GAZP, CCC)

AGGRESSIVE GAS EXPLORATION
(Set up fund)

EUROPEAN MARKET PENETRATION FOR NNPC

DEEPWATER DEVELOPMENT

DOMESTIC GAS MARKET SHARE CONSOLIDATION

- NPDC
- JV DEEP HORIZON
- DEEPWATER

- DOWNSTREAM GAS MARKET
 - UK
 - Continental Europe
- RETAIL GAS MARKET
 - LPG Outlets

- NNPC POST OGIC CONTRACTOR IN PSC

- BRANDED GAS MARKET
- PETROCHEMICAL GROWTH

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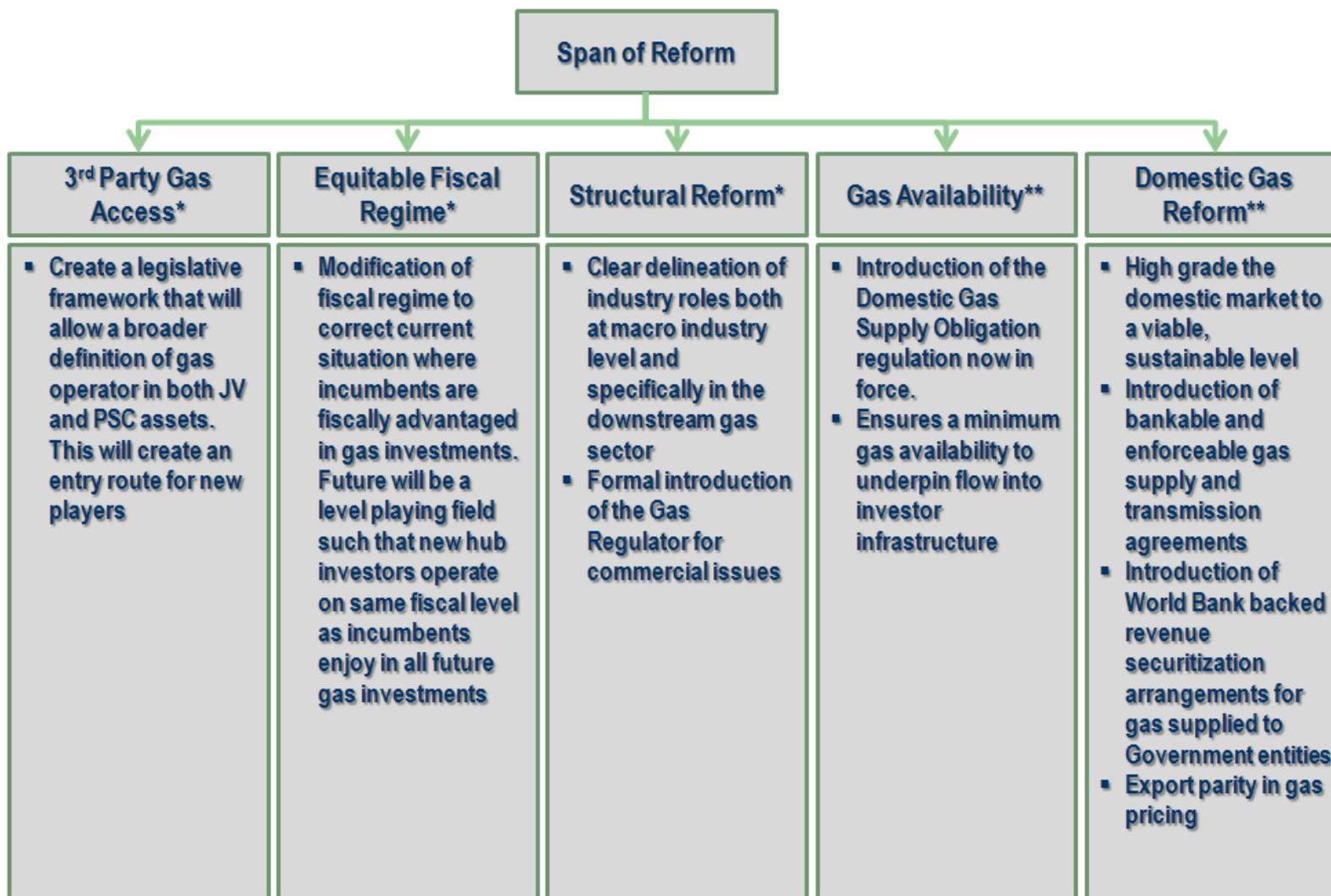
SUMMARY OF OUTSTANDING ISSUES HMoP's Intervention Required



- 1. Expedited publication of gazetted DSO Regulation. Key contact is HMoJ**
- 2. Early resolution of unresolved GSPA issues such as supplier liability cap etc.**
- 3. Accelerated approval of the establishment of the Strategic Aggregator (including interim Aggregator). Key contact is GMP team, GMD's office**
- 4. Urgent approval to engage Engineering firm to develop conceptual design for gas infrastructure.**
- 5. Commencement of engagement of Legislature on all areas of legislative intervention**



Areas for Legislative Discussion



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CONCLUSION

- **A sustainable framework for Jumpstarting the gas sector is essentially in place, specifically for the nation, but also for the NNPC**
- **With respect to gas-to-power, a program for delivery is in place and being monitored. FGN must maintain consistency of tone to IOC with respect to the consequence of non-compliance**
- **Broadly, critical executive interventions as outlined are required to consolidate the gains so far and provide the necessary push for the next phase in implementation**





Back Up Slides



APPLICABLE FISCAL TERMS

- **Current applicable Fiscal Regime for Upstream gas development is the Associated Gas Fiscal Agreement (AGFA) incentives under section 10A of the PPTA which allows for the following:**
 - **Investments required to separate crude oil and gas from the reservoir into usable products shall be considered as part of oil field development;**
 - **Capital investment on facilities & equipments to deliver associated gas in usable form at utilization or designated custody transfer points shall be treated, for tax purposes, as part of capital investment for oil development.**
 - **Capital allowances, operating expenses and basis of tax assessment shall be subject to the provisions of this act and the tax incentives under the revised MOU.**



APPLICABLE FISCAL TERMS (Contd)

- ❑ **Applicable fiscal terms for Downstream Gas is CITA (Companies Income Tax Act) Section 28G**

- ❑ **CITA incentives (Decree 18, 1998):**
 - ❑ **Tax free period of up to 5 yrs, the minimum being 3 years (Decree 30, 1999).**

 - ❑ **Alternative to the initial tax free period (above), an additional ITA (investment tax allowance) of 35% which shall not reduce the value of the asset. Such company not entitled to the ITA of 15% in (b) (ii) below.**

APPLICABLE FISCAL TERMS (Contd.)



- ❑ **Tax free dividend during the tax free period where:**
 - ❑ **The investment for the business was in foreign currency, or**
 - ❑ **The introduction of imported plant and machinery during the period was not less than 30% of the equity share capital of the company.**

- ❑ **Interest payable on loan obtained with prior approval of the Minister for a gas project shall be deductible.**

APPLICABLE FISCAL TERMS (Contd.)



- ❑ The tax free period of a company shall start on the day the company commences production as certified by the Ministry of Petroleum resources.
- ❑ Gas utilization under CITA is defined as : *“the marketing and distribution of natural gas for commercial purpose and include power plant, liquefied natural gas, gas to liquid plant, fertilizer plant, gas transmission and distribution pipelines”*.

APPLICABLE FISCAL TERMS (contd.)



- ❑ **Accelerated capital allowance after the tax free period, as follows**
 - ❑ **An annual allowance of 90% with 10% retention for investment in plant and machinery (Decree 19, 1998)**
 - ❑ **An additional investment allowance of 15% which shall not reduce the value of the asset; (Decree 30 1999)**

APPLICABLE FISCAL TERMS

- Likely Fiscal Changes



- Targeted at Upstream Gas Tax regime, No Change in CITA
- Removes Consolidation of Gas investment with Oil
 - Provides for a non discriminatory fiscal regime for all upstream Gas players, including Production Sharing Contracts
- A progressive tax regime that encourages cost control
- Removes Existing Government Subsidy in Upstream Gas development