

THE GOVERNMENT
OF
THE FEDERAL REPUBLIC OF NIGERIA

THE NATIONAL DOMESTIC GAS SUPPLY AND PRICING POLICY

The purpose of this document is to define the policy of the Federal Government of Nigeria in respect of the pricing of gas to be supplied to customers in the downstream gas sector.

THE NATIONAL DOMESTIC GAS SUPPLY AND PRICING POLICY

CONTENTS

	<u>PAGE</u>
(A) INTRODUCTION – POLICY ASPIRATIONS	2
(B) GROUPING OF STRATEGIC DEMAND SECTORS	4
• Strategic Domestic Sector	5
• Strategic Industrial Sector	5
• Commercial Sector	5
(C) GAS PRICING REFORM	6
(D) THE GAS PRICING FRAMEWORK	7
(i) Regulated Pricing Regime	7
(ii) Pseudo-Regulated Pricing Regime	7
(iii) Market - Led Pricing Regime	7
(iv) Indexation	9
(E) IMPLEMENTATION	10
(i) The Downstream Gas Act	10
(ii) Domestic Gas Reserves and Production Obligation	10
(iii) The Aggregate Price and the Strategic Gas Aggregator	11
CONCLUSION	12

THE NATIONAL DOMESTIC GAS SUPPLY AND PRICING POLICY

(A) INTRODUCTION – Policy Aspirations

Given the abundance of Nigeria's gas resources, Government has identified the accelerated development of the domestic gas sector as a focal strategy for achieving the national aspiration of aggressive GDP growth (10% per annum). Domestic gas is defined as gas utilized locally within the shores of Nigeria either for home, industrial and/or electric power use. Specifically for industrial use, gas used in value adding industries such as methanol, fertilizer etc. is considered domestic gas, regardless of whether the end product (i.e. fertilizer, methanol) is consumed locally or exported.

Gas export (LNG and pipeline) provide high returns to government through tax receipts and dividends for equity stake. However, it is recognized that beyond economic rent, there are broader strategic benefits to the economy that may be attained from the domestic utilization and value addition to natural gas. In essence, in addition to exporting of natural gas, Nigeria must develop strategies to ensure increased domestic utilization.

Rising gas prices in key international markets however continues to create a preferential pull for exports. Consequently, there is a disproportionate focus by gas suppliers in the country for LNG projects. This is creating an anomaly in Nigeria where there is now a significant shortfall in the availability of gas for domestic utilization. The continued shortfall directly threatens the economic aspirations of the nation which if unchecked may result in Nigeria supporting the development of the economies of the industrialized nations at the expense of its own economy.

The energy requirement to sustain an aggressive GDP growth is enormous. Currently, total demand (export and domestic) for natural gas far outstrips supply. The demand is driven by growth in the Power sector and other gas based industries such as Fertilizer, Methanol, LNG etc. Gas demand is forecast to grow from the current level of 4bcf/d to about 20bcf/d by 2010. In the short term, the growth in the domestic sector is particularly most aggressive, growing from less than 1bcf/d in 2006 to about 7bcf/d by 2010. This demand growth is underpinned largely by the power sector and by an increasing requirement by large industries such as fertilizer and methanol that require gas in high quantities. These industries which are unable to compete in high gas cost locations have expressed strong interest in relocating to Nigeria.

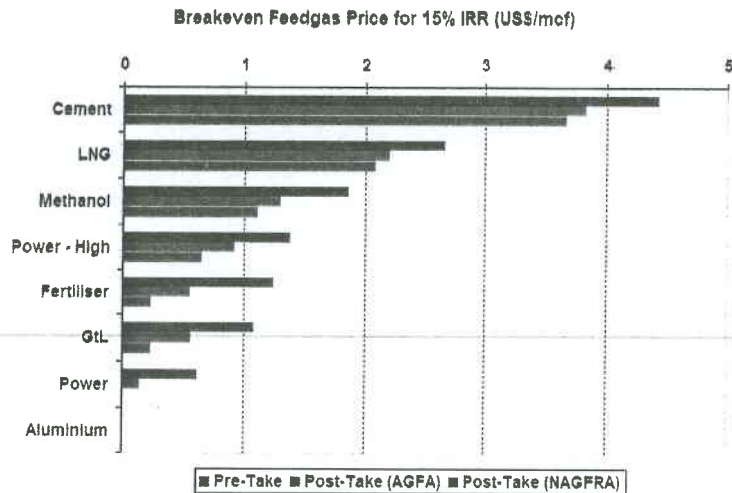
Nigeria needs to demonstrate availability and affordability of gas or else risk losing these industries to competing nations like Egypt, Trinidad etc. The scale of demand growth relative to supply growth creates an immediate availability

challenge. In addition, is the challenge of price affordability and hence gas pricing. The domestic demand sectors such as electric power, fertilizer, methanol etc. have varying capacity to bear gas prices (Fig. 1). For example, the Nigerian Power sector has a lower gas price threshold than a Methanol industry. Government is however keen to stimulate the growth of all these sectors. Timely availability, affordability and commerciality of supply of natural gas is a critical pre-condition for realizing the government's aspiration for the domestic economy.

In recognition of the urgent need for domestic gas availability and a pricing framework to drive and sustain a major gas based industrialization in Nigeria, this policy document seeks to:

1. provide solutions to the issue of gas pricing;
2. address domestic gas supply availability in a manner that delicately balances the need for domestic economic growth and revenue generation from exports; and
3. provide an implementation approach for the gas pricing that enables the full participation of all gas suppliers in the country in a manner that ensures sustained gas supply to the domestic market.

Fig. 1.0 Overview of Gas Price Bearing Capacity of Various Sectors

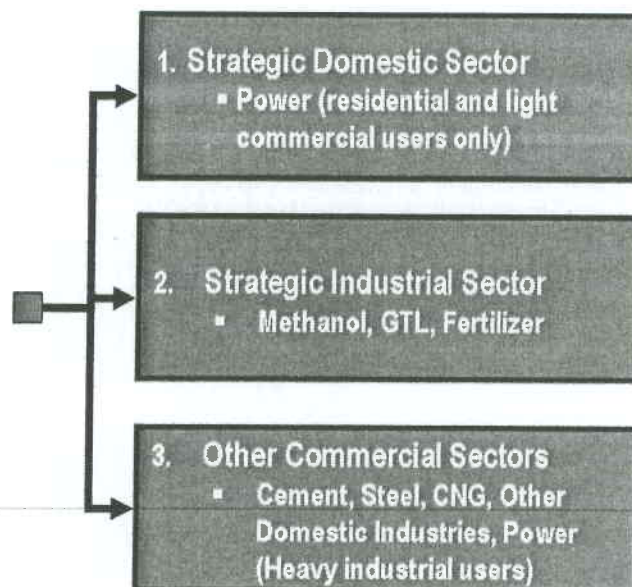


(B) GROUPING OF NIGERIA'S DOMESTIC DEMAND SECTORS

The need for a pricing strategy that recognises the diversity in the ability of the various industrial sub-sectors to bear gas price cannot be overstated. Such strategy will not only enable and sustain diversity of the demand sectors, thereby enabling Nigeria to benefit from the industrialisation potential that is inherent in gas, it will also enable the selective maximization of net revenues for Nigerian gas from sectors that are most able to deliver that direct economic benefit.

From a gas pricing strategy perspective, Government has grouped the entire domestic demand into three broad groupings. This grouping is in recognition of the fact that the different demand sectors have different strategic benefits to the country and different pricing considerations. Fig. 2.1 below presents the 3 categories. Any demand sector will fall into one of these categories and where there is a lack of clarity, the Minister for Energy will determine the classification of such sector.

Fig. 2.1: Grouping of Gas Demand Sectors



The groupings are:

- ***Strategic Domestic Sector*** – This refers to a **very limited set of sectors** that have a **significant direct multiplier effect** on the economy namely the Power Sector (residential and light commercial users) or other sector that the Honourable Minister for Energy may from time to time consider applicable. The strategic intent in gas pricing is to facilitate and ensure low cost gas access to these sectors in order to spur rapid economic growth.
- ***Strategic Industrial Sector*** – This refers to industries that **utilise gas as feedstock** in the production of **value added products** that are primarily destined for export or in some cases, consumed locally. Strategically, these sectors ensure that value is added to Nigerian gas before it is exported. The process of value addition ensures industrialisation, job creation etc. Typical projects in this group are Methanol, GTL and Fertilizer. For this sector, the strategic intent in pricing is to ensure that feedgas price is affordable and predictable in order to ensure competitiveness of the products in international markets in the face of competition from other gas producing countries such as Qatar, Trinidad etc. that provide gas at very low prices to buyers.
- ***Commercial Sectors*** – This refers to sectors that use gas as fuel as opposed to feedstock. Unlike the two previous classifications, projects in this category are a potential major direct revenue earner for Nigerian gas in view of their capacity to bear high gas prices as the competing alternative fuel is LPFO. Typical sectors in this category include cement and domestic manufacturing industries, industrial Power etc.

(C) GAS PRICING REFORM – LIQUIDS BASED PRICING APPROACH

A widely known characteristic of Nigerian gas is its relative richness in liquids i.e. NGLs. NGLs continue to attract a high price in international markets (similar trend in crude oil pricing). As a result of the potential high revenue that comes from NGLs produced in conjunction with residue dry gas, it is possible for a gas supply project to accommodate a relatively lower price for the residue dry gas and still be a profitable supply project. Residue dry gas is used mostly in the domestic market.

This gas pricing policy aims to exploit this intrinsic value of NGLs in deriving a relatively low gas price for the strategic domestic sector - Power. It is recognized that not all gas resources in the country are rich in NGLs, consequently, it is intended that this philosophy be applied selectively – especially in the short term as the Power sector is currently unable to pay higher price for gas (in view of the low end user power tariff that currently obtains in Nigeria). It is however the expectation that in the medium term, power tariff will be more commercial and a higher gas price will be achievable.

Based on an assumption of \$40/bbl long run NGL price, it has been established that across the Niger Delta, there is a limited volume of gas reserves for which the marginal cost of development and supply can be met profitably with a dry gas price of \$0.1/mcf. This assumes that the supplier receives \$0.1/mcf for the residue dry gas in addition to other NGL revenues at \$40/bbl. It is the intent of this policy that this category of gas reserves be deployed for use in the strategic domestic sectors. \$0.10/mmbtu is therefore established as the floor price for the strategic domestic sector. This low price is in line with the strategic intent of ensuring a low cost gas supply to those critical sectors of the economy.

In addition, based on existing transmission infrastructure costs in Nigeria and international benchmarks, a transmission tariff (on postage stamp basis) of \$0.30/mmbtu is proposed. The Honourable Minister for Energy may revisit this tariff from time to time as appropriate.

(D) THE GAS PRICING FRAMEWORK

The gas pricing framework proposed in this policy is a **transitional pricing arrangement**. The Honourable Minister of Energy (Gas) will monitor the environment and determine when the domestic market is fully developed and an alternative pricing approach is required.

It is important to establish that the pricing framework does not fix prices. It barely sets out a **transparent structure for determining the floor price** for dry gas for the 3 categories of demand sectors presented in section B. The floor price is the lowest price that gas can be supplied to a particular category of demand sector. The actual price paid is based on an indexation formula jointly determined during negotiation between the buyer and seller. In essence, the market actually determines the price by establishing the indexation mechanism.

Figure 3.1 below presents a schematic of the pricing framework. 3 distinct price regimes are evident in the framework, corresponding to 3 different approaches for determining the floor price. The 3 approaches include

1. Cost of supply basis (regulated pricing regime)
2. Product netback price basis and (pseudo-regulated pricing regime)
3. Alternative fuels basis. (market led regime)

The Regulated Pricing Regime (cost of supply basis): This pricing approach applies specifically to the strategic domestic sectors of Power. As discussed in section C, the floor price for this category is determined primarily by establishing the lowest cost of supply that allows a 15% rate of return to the supplier. This has been established as \$0.1/mmbtu for a limited volume of gas reserves. These reserves will therefore be assumed dedicated to the strategic domestic sector.

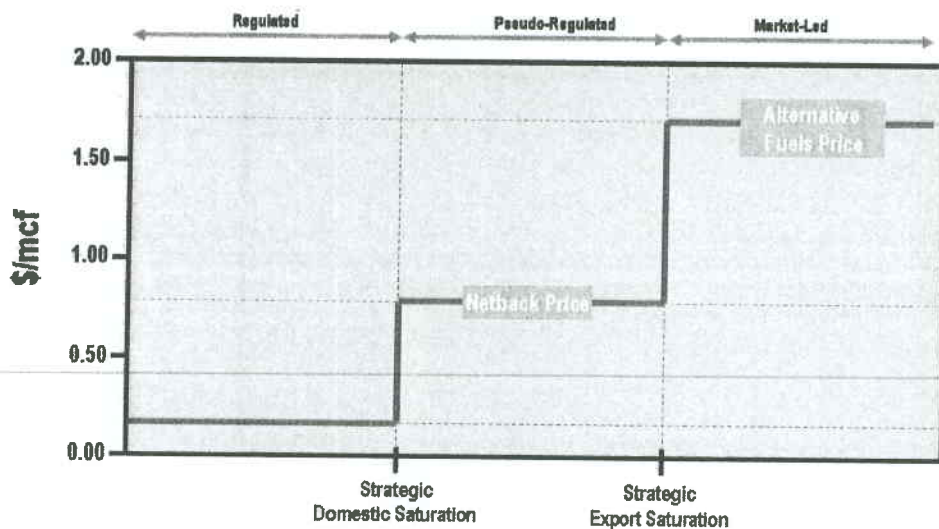
The Pseudo-Regulated Pricing Regime (Product Netback basis): The second floor price determination approach applies strictly to strategic industrial sectors i.e. sectors that use the gas as feedstock. For this group, the floor price is not based on the cost of supply of the gas, but on the netback of the product price. The product price used in determining the floor price is the assumed long run price of the product. With this approach, the pricing of gas will better reflect the ability of the sector to pay given the price of its product. However, since the intention of this policy is not to support sectors that are unviable i.e. sectors whose netback price translates to a gas floor price lower than the cost of supply of gas, the consideration of affordability will not be at the expense of sustainability of gas supply.

The Market Led Regime (Alternative Fuels Basis): The third floor price determination approach applies to all other sectors that use gas as fuel or

wholesale buyers buying gas for subsequent resale. For this category, the price of gas is indexed to the price of alternative fuel such as LPFO. The indexation will be established during negotiation.

The foregoing structure provides the basis for the pricing framework illustrated below. 3 segments can be identified in the framework consistent with the 3 demand sector groupings, starting with the lowest priced sector, the strategic domestic sector to the highest priced sector – the commercial sectors. It is assumed that pricing for each demand sector will transition to the next higher pricing band once a saturation level has been attained. For example, for the strategic domestic sector, once the domestic requirement has been met (domestic saturation point) and Power is now being exported, the framework proposes that export Power benefits from a relatively higher price, determined by the netbacking philosophy applied to strategic industrial sectors such as methanol. Similarly, once the capacity of a strategic industrial sector exceeds an export saturation limit (i.e. once Nigeria’s export capacity for that sector e.g. fertilizer is assumed to have reached an acceptable limit), any incremental capacity will attract a much higher price consistent with that of commercial sector buyers. Through this transitional mechanism, pricing can be aligned with required capacities within the economy.

Figure 4.1 Illustration of the Gas Pricing Framework



Indexation

It is important to reiterate that the entire gas pricing framework simply specifies the floor price. Actual prices will include an escalation for inflation and an indexation to real time product price (which may be higher than the long run price used in the determination of the floor price) and/or any other indices considered appropriate by both buyer and seller of the gas. The indexation will be determined through a process of negotiation.

(E) IMPLEMENTATION

(i) The Downstream Gas Act

To underpin the proposed pricing framework, Government will establish a Gas Regulatory Agency, the Gas Regulatory Commission, through the proposed Downstream Gas Act. Amongst other functions, the Commission will have the power, where necessary, to regulate the price of gas supplied and utilized in the downstream gas sector and the power to promote reliable and efficient use of gas throughout Nigeria. It will also have the power to monitor and impose pricing restrictions on licensees. Pending the establishment of this GRC however, an interim agency will be set up by the Minister as a department within the Ministry of Energy (Gas).

Consistent with the pricing principles established by the Act, the Commission will have the power to regulate the prices charged by licensees where competition has not developed to such an extent as to protect the interest of consumers. The relevant pricing principles in this regard are cost reflectivity, price disaggregation and the earning of a reasonable return on investment by licensees.

A Transitional Pricing Plan setting out temporary or transitional pricing arrangements allowing for a gradual transition towards pricing arrangements that are consistent with the pricing principles above is required to be introduced by the Downstream Gas Regulatory Agency. The gas pricing framework presented in this policy document is designed to achieve this objective.

(ii) Domestic Gas Reserves and Production Obligation

In implementing this pricing policy, it is essential that there is sufficient gas available for the various demand sectors. To facilitate this, a domestic gas supply and reserves obligation will be imposed on all operators in the country. In essence, all gas (AG and NAG) asset holders will be required to dedicate a specific proportion of their gas reserves and production for supply to the domestic market. This is the “*Domestic Reserves Obligation*”.

The reserve obligation will be broken down annually to a production obligation for the same period. The sum total of all obligations will equal the planned domestic requirement for the stated period. Periodical reviews to the domestic obligation will take place to reflect the changing demographics of the demand and supply landscape i.e. new demand will be allocated accordingly as new suppliers come on stream.

The Minister for Energy will periodically stipulate the reserves and production obligation of the various operators. The allocation of the obligation across operators will be based on the principles of equity to be determined by the Minister.

(iii) The Aggregate Gas Price and the Strategic Gas Aggregator

The gas pricing framework stipulates a pricing regime for various demand sectors ranging from a floor price of about \$0.1/mcf for the strategic domestic sectors to over \$2/mcf for the commercial sectors. The Aggregate Domestic Gas Price is the forecast average domestic price based on the projected total domestic demand portfolio using the relevant prices proposed by this framework.

All suppliers of gas in the country will be paid the aggregate domestic gas price. A target aggregate price will be set by the Gas Regulator based on the known portfolio of domestic demand. The portfolio will be balanced continually to ensure that the aggregate price does not fall below the threshold. In essence, the suppliers have a fixed price whilst the buyers will pay the sector price proposed in the framework. The aggregate pricing will ensure that regardless of their geographical location all suppliers are able to benefit from the high priced customers as well as from the low priced buyers. The aggregate price will ensure that the suppliers receive an acceptable return for their domestic obligation.

A Strategic Aggregator (under the auspice of the Department of Gas or the GRC) will manage the implementation of the domestic reserves and production obligation and the aggregate price. It will ensure a balanced growth of the domestic portfolio such that the target minimum aggregate price is achieved whilst not compromising the nation's primary objective for economic growth by ensuring the availability of adequate volumes of gas to the strategic domestic sectors.

Conceptually, the Strategic Aggregator acts as a one stop intermediary point between the suppliers and the diverse demand sectors and will ensure that gas is supplied at the aggregated price. Through a Gas Management Model, the Strategic Aggregator plays the role of portfolio manager on behalf of all suppliers – the primary objective being to preserve a minimum aggregate price portfolio. When the aggregate price is higher than the minimum threshold, an agreed portion will be paid out to the suppliers whilst the balance will be retained as cushion in the event that the portfolio mix for unavoidable reasons falls below the target minimum threshold.

Conclusion

The National Domestic Gas Supply and Pricing Policy therefore aims to fully align the gas sector with the economic growth aspiration of the nation. This policy will be applied in conjunction with the Gas Pricing regulations and modifications thereto.

CHAPTER III

PETROLEUM ACT

SUBSIDIARY LEGISLATION

List of Subsidiary Legislation

NATIONAL DOMESTIC GAS SUPPLY AND PRICING REGULATIONS

NATIONAL DOMESTIC GAS SUPPLY AND PRICING REGULATIONS

Under Section 9 of the Petroleum Act and Paragraph 34 of the First Schedule to the Petroleum Act.

THE DEPARTMENT OF GAS

1. Establishment of the Department of Gas

There is hereby established a Department within the Ministry of Energy to be known as the Department of Gas

2. Powers of the Department of Gas

The Department of Gas shall have the power to do the following: -

- (1) regulate the gas sector in accordance with these Regulations, the National Gas Master plan and national policies as may be issued in respect for the gas sector from time to time by the Federal Government;
- (2) maintain constant surveillance over indices relevant to gas pricing, identify macro-economic factors with relation to the price of Gas and advice the Federal Government on appropriate strategies;
- (3) at the beginning of each year to announce the annual Domestic Gas Demand Requirement;
- (4) allocate a Domestic Gas Supply Obligation to every person licensed to produce petroleum at the beginning of every year;
- (5) establish an Aggregate Price which shall be used by the Domestic Gas Aggregator as a basis for gas supply to the domestic sector;
- (6) establish the guidelines and codes of conduct for all operators in the downstream gas sector;
- (7) ensure equitable and transparent access to the gas transportation network;
- (8) subject to the approval of the Minister, determine the Domestic and Export Saturation Indices for all sectors;
- (9) arbitrate on all issues of conflict between purchasers, suppliers and the Domestic Gas Aggregator.

THE DOMESTIC GAS AGGREGATOR

3. Establishment of the Domestic Gas Aggregator

- (a) A Domestic Gas Aggregator shall be established by the Department of Gas in consultation with suppliers of gas.

4. Functions of the Domestic Gas Aggregator

The Domestic Gas Aggregator shall:

- (1) implement a Gas Management Model through which the demand and supply of gas for utilization within Nigeria shall be monitored;
- (2) operate a nominations and balancing mechanism for equitable curtailment of gas production whenever demand and supply expediencies require;
- (3) ensure transparency of dealings between gas suppliers and purchasers; and
- (4) act as an intermediary between suppliers and purchasers of gas in the domestic market and ensure the supply of gas to the Strategic Sectors in accordance with the approved national gas pricing framework.

5. Powers of the Domestic Gas Aggregator

The Domestic Gas Aggregator shall have the power:

- a) to ensure that the Domestic Gas Demand Requirement is achieved through the implementation of the Domestic Gas Supply Obligation;
- b) ensure a balanced growth of domestic gas projects through the availability of adequate volumes of gas to the Strategic Sectors;
- c) to open and manage an Escrow Account with an Escrow Agent approved by the Department of Gas;
- d) to direct purchasers of gas to make payment for gas supply into the Escrow Account in accordance with the payment schedules agreed by the gas suppliers, gas purchasers and the Domestic Gas Aggregator;
- e) to make payment to gas suppliers in accordance with the minimum Aggregate Price and appropriate indexation for the gas supplied;
- f) to prepare and provide annually, a detailed audit report of the Escrow Account, to all suppliers of gas, and
- g) do all such things as are necessary for or incidental to the carrying out of its functions and duties under these Regulations.

6. Domestic Gas Demand Requirement

Every person or company licensed to produce petroleum shall –

- a) submit a gas production and supply plan consistent with its obligations under the Domestic Gas Demand Requirement to the Department of Gas;
- b) when required, supply a specific volume of gas to a purchaser in accordance with a Gas Purchase Order issued by the Domestic Gas Aggregator;
- c) pay compensation to any purchaser for any losses suffered as a result of default to supply gas in compliance with the order of the Domestic Gas Aggregator.

7. Penalties for Non Compliance with Gas Supply Obligation

From the commencement of these Regulations, any supplier who does not comply with its Domestic Gas Supply Obligations as specified by the Department of Gas shall:

1. pay for the volumes not supplied based on the take or pay provisions of the executed GSPA or at a price of US\$3.50/MScf, whichever is higher. (this is an after tax penalty, not cost recoverable)
2. not supply gas to any export project in addition to any other penalties that the Minister may deem fit.

8. Procedure for Gas Supply

- (1) The sale and supply of gas shall commence with an application by the purchaser to the Domestic Gas Aggregator for a Gas Purchase Order.
- (2) Upon receipt of the application, the Domestic Gas Aggregator shall conduct due diligence on the purchaser with a view to determining its ability to engage in wholesale purchase of gas.
- (3) Upon a satisfactory due diligence, the Domestic Gas Aggregator shall issue a Gas Purchase Order to the purchaser.
- (4) The Gas Purchase Order shall specify the gas supplier expected to supply the required gas, the quantity of the gas to be supplied to the purchaser, the price payable in respect of the gas to be supplied, the delivery schedule, revenue due to the gas supplier and other details as may be determined by the Domestic Gas Aggregator.
- (5) The issuance of a Gas Purchase Order by the Domestic Gas Aggregator shall be sufficient evidence that a quantity of gas has been

allocated for supply to a purchaser in accordance with the Domestic Gas Demand Requirement.

- (6) The Domestic Gas Aggregator shall attach to the Gas Purchase Order, a master gas sales and purchase agreement which will contain the operational and commercial issues relevant to the transaction.

9. Power of the Minister

The Minister shall have the power to:

- (a) review or amend, alter, add to or delete any provision of these Regulations as he may deem fit.
- (b) consult with the representatives of relevant stakeholders, prior to the review and amendments pursuant to subsection (a) of this Section.
- (c) in reviewing or amending these Regulations, the Minister may take into consideration the findings of the consultative process carried out pursuant to subsection (b) of this Section.
- (d) allocate gas to the various domestic demand sectors
- (e) from time to time identify and prioritize specific export projects that have strategic impact on the development of domestic gas market for consideration and inclusion in the Domestic Gas Demand Requirement
- (f) impose any other penalties for non compliance pursuant to Section 7 of this regulation.

10. Interpretation

In these Regulations, unless the context otherwise requires –

“Aggregate Price” means the price for the supply of gas which shall be reflective of the average cost of gas supply in Nigeria for the Domestic Gas Demand Requirement;

“Domestic Gas Demand Requirement” means an aggregate of the volume of gas required to meet the gas demand for strategic sectors within the domestic economy for a specific period of time;

“Domestic Gas Supply Obligation” means the obligation of every person licensed to produce petroleum to dedicate a specific volume of gas towards the Domestic Gas Demand Requirement and to deliver the gas to a purchaser in accordance with a specified nominations procedure;

“Domestic Saturation Index” means the point at which the sector production capacity fully meets an aspired domestic requirement for that sector.

“Escrow Account” means the account referred to in regulation 5 of these Regulations

“Export Saturation Index” means the point at which the price of gas in for sale to any domestic project would be allowed to compete with the price of gas at the international market.

“Gas Management Model” means a model for managing the gas reserves held by every person licensed to produce petroleum in Nigeria and in addition, monitor the demand and supply of gas to the Strategic Sectors and other domestic projects.

“Gas Purchase Order” means the Gas Purchase Order referred to in regulation 8 of these regulations.

“Minister” means the Minister for the time being charged with responsibility for matters relating to Gas resources;

“Ministry” means the ministry charged with the responsibility for Energy;

“National Gas Master Plan” means the gas master plan developed by the Federal Government from time to time for the sustainable development and utilization of Nigeria’s natural gas resources.

“Strategic Sectors” means the Strategic Domestic Sectors as defined by the Federal Government in the National Domestic Gas Supply and Pricing Policy as strategic to the attainment of its economic policy aspirations.

“These Regulations” means the National Domestic Gas Supply and Pricing Regulations.

11. Short Title

These Regulations may be cited as the National Domestic Gas Supply and Pricing Regulations.