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TEMPLARS ThoughtLab

An Overview of Nigeria's Domestic Gas Pricing Framework

The recent announcement of the **Domestic Base Price** for 2024 by the Nigerian Midstream and Downstream Petroleum Regulatory Authority marks a significant development in Nigeria's domestic gas market. This development has ushered in the need to re-evaluate the domestic gas pricing framework ("**Domestic Gas Pricing Framework**"), and its implications on stakeholders within the domestic gas value chain.

This Thought Leadership piece discusses the salient features of the Domestic Gas Pricing Framework.

The Regulatory Framework

In the exercise of the powers conferred on the Nigerian Midstream and Downstream Petroleum Regulatory Authority under Section 33 of the Petroleum Industry Act, 2021 ("**PIA**"), the Nigerian Midstream and Downstream Petroleum Regulatory Authority ("**NMDPRA**") issued the Gas Pricing and Domestic Demand Regulations¹ (the "**Pricing and Demand Reg**").

Primarily, the Pricing and Demand Reg:

- (i) redefines the Strategic Sectors,
- (ii) differentiates the regulated market from the unregulated market and makes provisions for each market,
- (iii) sets out the principles underpinning gas aggregation and mandatory domestic gas delivery obligations,
- (iv) outlines the principles underpinning gas pricing classification, and
- (v) sets out the conditions for the attainment of a free market status.

The Regulated Domestic Market: (i) The Strategic Sectors, and (ii) Gas Distributors

The Strategic Sectors: A Redefinition

The Pricing and Demand Reg introduces a nuanced definition of the three Strategic Sectors, i.e., the **Power Sector**, the **Commercial Sector** and the **Gas Based Industries**.

¹ With a Commencement Date of 9 February, 2023.

(i) The Power Sector and the Exclusions

The Pricing and Demand Reg defines the Power Sector as power plants which supply electricity based on regulated tariffs to residential, commercial and industrial customers in a particular geographical area, directly or through distribution companies. These power plants are connected to the National Grid and produce power primarily based on fossil fuels with individual plants typically exceeding a size of 10MW.

However, the Pricing and Demand Reg **excludes** the following power plants from the Strategic Sectors:

- Independent mini-grids, that are self-contained power systems, disconnected from the National Grid and serve rural areas or other communities based primarily on renewable power with or without fossil fuels as back-up.
- Captive and embedded power plants generating electricity exclusively for a single-user.²

(ii) The Gas Based Industries

Gas Based Industries are industries that utilise gas as feedstock or as industrial raw material. The list of industries identified in the PIA is not closed as the NMDPRA may, from time to time, include other industries in this sector. Currently, the industries listed in the PIA are producers of ammonia, urea, methanol, polypropylene and low sulphur diesel.

(iii) The Commercial Sector

The Commercial Sector refers to the industries that engage in a broader range of industrial and commercial activities which utilise gas as an energy source and are energy intensive). Gas distributing companies have been excluded from this sector even though they are obligated to derive their gas price from the gas price applicable to the Commercial Sector.

A gas buyer whose line of business is not included in any of the three Strategic Sectors but who reasonably believes that it is eligible to be included in any of the Strategic Sectors may apply to the NMDPRA for inclusion. **Gas buyers may want to use this opportunity, in so far as the reason for inclusion can be justified, to apply for inclusion to benefit from the Domestic Gas Pricing Framework.**

Gas Distributors: Excluded from the Strategic Sector but Regulated

Although the PIA unequivocally excludes gas distributors from the Strategic Sectors and empowers gas distributors to negotiate supply and pricing freely, the PIA and the Pricing and Demand Reg prescribe a **capped free market price**³ for gas sold by gas distributors (i.e., *the holder of a license for the distribution of natural gas through a low-pressure pipeline system in a specific geographical area with rights to sell its natural gas to consumers including retail customers*). This means that the gas price at the delivery point, albeit influenced by market forces, will be capped at the Domestic Base Price plus \$0.50 per MMBtu mirroring the gas price applicable to the Commercial Sector.

² Except under permitted exceptions.

³ 2nd Schedule, Pricing and Demand Reg.

Gas Specification for The Strategic Sectors and Gas Distributors

(i) *The Specification of Gas and The Delivery Point:*

The Domestic Gas Pricing Framework applies only to a specification of gas referred to as **Marketable Natural Gas** under the PIA. Marketable Natural Gas is natural gas that meets the specifications determined by the NMDPRA for distribution to wholesale and retail customers for use as domestic, commercial or industrial fuel; and as feedstock or industrial raw material. The **Delivery Point** for this quality specification is at the exit of the gas processing facility or gas conditioning plant or such other location that is downstream of the facility that produced, processed, conditioned or treated the natural gas to produce the Marketable Natural Gas.

It is instructive to note that the transportation tariff for the delivery of the Marketable Natural Gas to retail customers or wholesale customers to any point beyond the Delivery Point, e.g., to the buyer's facilities, is not included in the gas price and will be charged separately.

(ii) *Modification to the Specification and Impact on Existing Contracts*

A critical point, for gas project developers particularly stakeholders in the Strategic Sectors, to note is that the NMDPRA is authorised to change the specifications⁴ of what constitutes Marketable Natural Gas. Existing gas purchase and sales contracts or other firm/ uninterruptible commitments for the supply of Marketable Natural Gas must be adjusted to meet the new specifications within the timeframe specified by the NMDPRA.

Whilst the NMDPRA is obligated to publish the new specifications not later than six months prior to the mandatory implementation of such change by the relevant stakeholders, one cannot but note that this may be disruptive to existing operations as some facilities may require reconfiguration to be able to accommodate the mandatory implementation of such change. This may also have cost implications on both the sell-side and the buy-side.

The Domestic Base Price

The Interplay between the Domestic Base Price and the (i) Strategic Sectors and (ii) Gas Distributors

To ensure the supply of gas to the Strategic Sectors and institutionalise industrialisation through gas monetisation, the PIA places mandatory obligations on upstream gas producers to deliver gas to the Strategic Sectors. The essentials of these mandatory delivery obligations are elaborated on in greater detail later in this Thought Leadership piece. Importantly, the Domestic Base Price is used to determine the gas prices for the three Strategic Sectors. **Table 1 sets out the formula and highlights the criticality of the Domestic Base Price.**

One of the central tenets of the Domestic Gas Pricing Framework is the establishment of the Domestic Base Price which shall be determined by the NMDPRA on the 1st of April of each year until the NMDPRA determines that the domestic gas market has attained a free market status.

The Domestic Base Price shall be the lower of the export parity price or the domestic supply price. The export parity price is the price received by (i) upstream gas producers from the Nigerian Liquefied Natural Gas Limited, or (ii) other exporters of raw gas at the measurement point in the field for the purposes of exporting the raw gas as LNG or through

⁴ Section 3(3), Pricing and Demand Reg.

an export pipeline. On the other hand, the domestic gas supply price is the price established by the Nigerian Upstream Petroleum Regulatory Commission (“NUPRC”) on the basis of gas supply curves submitted by upstream gas producers yearly.

By benchmarking the Domestic Base Price against the lower of the two variables (i.e., the export parity price or the domestic supply price), the NMDPRA seeks to ensure that the principles prescribed in the PIA undergirding the formulation of the Domestic Base Price are adhered to. The principles include:

- The Domestic Base Price must be of a level that voluntarily encourages the upstream exploration and production companies to produce and deliver sufficient natural gas supplies to the domestic market (**1st Principle**).
- The Domestic Base Price must not be higher (**subject to the 1st Principle**) than the average of similar natural gas prices in major emerging countries (as determined by the NMDPRA) that are significant producers of natural gas (**2nd Principle**).
- The Domestic Base Price shall be adjusted upward (**subject to the 2nd Principle**) on a yearly basis to account for inflation (**3rd Principle**).
- The ranking of gas available for the domestic gas market shall be determined by a tier system based on the cost of supply (**4th Principle**).

Table 1: The Interplay between the Domestic Base Price and the Wholesale Price of Marketable Natural Gas for the Three Strategic Sectors

SECTOR	FLOOR PRICE USD/MMBTU	PRICE USD/MMBTU	CEILING PRICE USD/MMBTU
Power		Domestic Base Price i.e., USD 2.42	
Commercial		Domestic Base Price + USD 0.50 i.e., USD 2.92	
Gas Based industries	USD 0.90	CP= NRP * (1 + EPF) <= EPP ⁵	Domestic Base Price i.e., USD 2.42

Table 2: The Interplay between the Domestic Base Price and the Price of Marketable Natural Gas Sold by Gas Distributors

SECTOR	FLOOR PRICE USD/MMBTU	PRICE USD/MMBTU	CEILING PRICE USD/MMBTU
Gas Distributors			Domestic Base Price + USD 0.50

⁵ 4th Schedule, Petroleum Industry Act.

Where:

CP is the applicable gas price in \$/MMBtu, EPP is the Domestic Base Price applicable for any year, NRP is the National Reference Price which is US\$1/MMBtu (subject to a change by the NMDPRA), EPF is the End Product Factor which is described by the following formula: $(CMPP - PRP) / PRP$. PRP = Product Reference Price in \$/MT, which would vary depending on the industry (subject to a change by the NMDPRA).

The Regulatory Enabler for The Implementation of the Domestic Gas Pricing Framework

(i) Domestic Gas Delivery Obligations

To ensure that the Strategic Sectors are served at designated delivery points, the PIA introduces the mandatory domestic gas delivery obligation (**DGDO**) construct. The DGDO construct mandates upstream gas producers to allocate, based on the domestic gas demand requirement, a percentage of their total gas production for sale to the Strategic Sectors. The DGDO construct seeks to ensure that Marketable Natural Gas is available at a regulated price until the domestic gas market attains a free market status.

Essentially, the domestic gas demand requirement⁶ refers to an estimate of the total amount of natural gas that is needed to satisfy the energy demands of the domestic market. Upstream gas producers and domestic gas aggregators use this requirement to plan their gas production and aggregation matrices.

The gas aggregator acts as bridge between the upstream gas producers and Strategic Sector offtakers within the construct of the DGDO.

(ii) Domestic Gas Delivery Obligations versus Voluntary Sales

Any upstream gas producer who has satisfied its DGDO may deliver further supplies of Marketable Natural Gas to third parties on a willing buyer-willing seller free market basis. Notably, upstream producers who achieve a total direct sales volume that meets or exceeds their DGDO are exempt from utilizing the gas aggregator and are deemed to have fulfilled their domestic quota of the domestic gas demand requirement.

(iii) Non-Compliance with the Allocated DGDO

Non-compliance with the DGDO attracts a penalty of US \$3.50/ MMBtu of undelivered gas. However, where the upstream gas producer of Marketable Natural Gas has a separate agreement with a Strategic Sector customer, the penalty will be determined by that specific agreement. Such non-compliant upstream gas producers may also be prohibited from supplying gas to any newly established midstream gas operations. However, upstream gas producers can avoid penalties if they can demonstrate that failure to deliver was due to defensible reasons beyond their control.⁷

Reporting Obligations to Establish Gas Price Curves

(i) Notification of Voluntary Sales

Sales conducted on a willing seller- willing buyer free market pricing basis must be notified to the NUPRC by the upstream gas producer.

(ii) Notification of sale of raw gas on a free market basis

An upstream gas producer may sell raw gas at the measurement point on a free market basis provided the upstream gas producer notifies both the NUPRC and the NMDPRA of the respective volumes and prices upon completion of such sales.⁸

(iii) Notification of volumes sold and their applicable prices

⁶ The domestic gas demand requirement is published by the NMDPRA on or before the 1st of March of each calendar year.

⁷ Section 110, Petroleum Industry Act.

⁸ Section 5(2), Pricing and Demand Reg.

Prior to the 1st of February of each year, upstream gas producers, wholesale suppliers, gas distributors, gas retailers and wholesale customers of Marketable Natural Gas shall notify the NMDPRA of the volumes sold and gas prices applied in the preceding year.

Unregulated Markets

Sale of Marketable Natural Gas on a **free market basis** to the (i) Strategic Sectors, (ii) Non-Strategic Sectors, (iii) Gas Retailers, and (iv) Exporters; and sale of raw gas to the (i) domestic market and for (ii) exports; constitute unregulated markets sales. Such sales are not subject to the Domestic Base Price.

Attainment of a Free Market Status

The NMDPRA is empowered to evaluate the Strategic Sectors to determine if the domestic market has attained a free market status. To make this assessment, the NMDPRA examines factors such as market regulation, infrastructure adequacy, trading platforms, market access and the presence of market mechanisms like bilateral trading, balancing rules and standardized contracts.

Once a free market is established in a Strategic Sector, the NMDPRA in collaboration with NUPRC will notify key stakeholders with a one-year notice. This signifies the end of the regulated pricing regime for that Strategic Sector, allowing market forces to determine prices.

If the three Strategic Sectors attain free market status, the regulated gas pricing system, along with domestic gas delivery obligations and gas aggregation requirements, will be completely terminated on the effective date specified in the final one-year notice. The declaration of a free market status will signal a total shift towards a market-driven system, where competition will dictate prices and foster innovation in gas supply and delivery.

Conclusion

The adoption of the Domestic Base Price and the evolution of the Gas Pricing Framework are critical milestones for Nigeria's domestic gas market. Benchmarking the Domestic Base Price against a variable such as the domestic supply price derived from gas supply curves submitted by upstream gas producers suggests that the NMDPRA is committed to encouraging voluntary participation in the Strategic Sectors.

However, as the market evolves, we would expect the NMDPRA to exercise the power to alter gas specifications with restraint, and to carefully consider the desirability or otherwise of compelling the alteration of existing operational contracts to implement changes to the gas specification. The entitlement of gas sellers to gas price re-openers where a mandatory alteration exposes a gas seller to significant cost implications should also be considered by the NMDPRA.