National Gas Policy 2017—Highlights and Analysis

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Summary

On 28 June 2017, Nigeria's Federal Executive Council approved the National Gas Policy (the Policy) that articulates the current government's vision, sets goals and devises strategies for a wholescale reconfiguration of the legal, institutional, fiscal and commercial framework of the gas sector. The overriding objective of the policy is to remove barriers to gas capital inflows and create an investment-friendly environment. The Policy proposes the appointment of an independent regulator with economic and technical oversight (and in whom all regulatory and pseudo-regulatory functions would be consolidated). A regime of legal unbundling is contemplated that prevents industry participants from owning interests in other segments of the relevant market. Although unbundling has been used by advanced economies seeking to achieve greater market efficiency, it is not necessarily suitable for a developing economy facing various infrastructure challenges (where the primary concern should be on strengthening the economics of grid investment).

The DGSO gas regime will proceed with a pricing formula, which will be released subsequently, but policy also needs to address potential DGSO volume risk because of insufficient demand. To incentivise domestic gas supply, wholesale gas is essentially "carved out" of DGSO gas with its pricing indexed to the Export Parity Netback Gas Price (EPP) applicable in the liquefied natural gas (LNG) trade. However, it remains to be seen whether this measure will provide sufficient motivation for reducing export volumes in preference for local supply. The "opportunity cost" for domestic supply would include not only the unrecovered cost of LNG facilities but also the forgoing of a return on each segment of the LNG value chain.

The Policy contains several proposals designed to encourage wholesale market competition and predicates the declaration of the existence of a competitive wholesale market on the occurrence of specified events. The events, however, would suggest that a somewhat clearer perspective on the requirements for market deregulation is required. The Policy currently adopts a "wait and see" approach as to whether GACN would continue when, in the author's opinion, it would be preferable if it did not given the inconsistency between the current scope of its remit and the promotion of downstream choice, an essential factor in the evolution of market competition.

The Policy seeks to stimulate stand-alone gas investments by removing current tax incentives that promote associated gas projects. Under the Policy, tax instruments for gas projects will include corporate income tax and a hydrocarbon tax. Unlike corporate income tax that charges accounting profits to tax, hydrocarbon tax is a tax on rent that is collected only after resource investments are recouped, together with a minimum rate of return.

The Policy contemplates a Gas Resource Management Plan that identifies locations with gas reserves, infrastructure requirements and markets. Perhaps, for the first time, state policy will extend to PSC gas with the introduction of a model Gas Development Agreement that addresses the contractual and fiscal issues in deep-water operations. Key policy concerns for the government would be the nature of fiscal incentives necessary to attract gas investments and enhancing investment economics by encouraging FLNG in deep-water installations.

The immediate outlook for Nigeria's LNG is somewhat challenging. To boost the nation's LNG trade, the initial focus should be on setting medium- to long-term goals, e.g. consolidating Nigeria's position as a hub for natural gas supply in West Africa, as well as promoting domestic LNG consumption.

The Policy predicts a more significant role for CNG and LPG in domestic gas utilisation, which will require the state to provide incentives for CNG use and to reinforce LPG's positive qualities over kerosene (its closest substitute). State policy also recognises the need for a Competency Development Framework that creates opportunities for the acquisition of local expertise under a system that promotes supervised practical experience for graduates and apprentices in the industry. The goal of reducing flare gas would depend on the size of the penalty for flaring gas and the viability of any investment in flare-gas commercialisation.

Introduction

Nigeria has great natural gas potential. With a proven reserve of 180tcf, which is estimated to reach 600tcf, Nigeria ranks as the leading gas province in Africa and 7th largest in the world. Nigeria's natural gas is premium quality, rich in natural gas liquids, almost sulphur free and with low carbon dioxide content. As a low-cost industry, the country's natural gas promises higher returns and therefore ordinarily should be an attractive investment option. However, unfortunately, this has not been the

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case. Investors have been discouraged by a number of issues that include low upstream gas prices, a less than robust demand profile, issues with the existing infrastructure network and the need for a legal framework for downstream operations. There are also issues with host community restlessness and potential pipeline vandalism.

Nigeria's petroleum sector is "crude-centric", with legislation such as the Petroleum Act and its subsidiary regulations focussing on liquid hydrocarbon projects, with less consideration being given to gas development. However, recent years have seen a series of efforts in reforming the petroleum sector by reconfiguring the natural gas segment through the enactment of gas-specific legislation designed to address various sectoral issues, to enhance regulation and to improve investment economics. Such measures include the Downstream Gas Bill, the Petroleum Industry Bill, the Gas Masterplan, the National Domestic Gas Supply & Pricing Regulations (the 2008 Regulations) and the National Domestic Gas Supply & Pricing Policy (the 2008 Policy) These measures are essentially a body of gas-centred provisions that demonstrate the government's resolve to move attention to natural gas development by creating an enabling environment for the inflow of gas capital.

The reforms have, however, not necessarily changed the "narrative" for the nation's gas industry (with state imperatives continuing to drive the natural gas industry). State management of the sector has not necessarily incentivised investment in the development of the country's gas deposits. Gas, being a high-capital intensity resource with a lengthy gestation period, limited domestic funding can only "scratch the surface", leaving most gas deposits essentially "uncommercialised". Significant foreign capital inflow is therefore required to unlock the nation's natural gas riches.

To achieve state objectives for the natural gas industry, the Policy has been approved by the Federal Executive Council—the nation's federal cabinet. In this article, the author will aim to provide a high-level analysis of the contents of the Policy by examining its commercial, regulatory and fiscal policy statements. He shall also consider other salient aspects of the Policy, including infrastructure, local content, LNG, gas-flaring and re-injection. The objective of this exercise is to identify what are clearly laudable policy initiatives and make suggestions, where necessary, for policy improvements and adjustments.

Regulation

One of the most significant aspects of the Policy will be the creation of a single independent petroleum regulator to oversee the petroleum industry. The regulator will provide economic and technical oversight, in addition to discharging licensing functions (including all other regulatory and pseudo-regulatory functions previously performed by different industry regulators). The regulator will be equipped with a number of departments tasked with supervising different aspects of petroleum operations, e.g. regulation in respect of: (i) upstream oil/gas; (ii) midstream/downstream gas; and (iii) midstream/downstream oil. The Policy laudably advocates transparency in the metering and measuring of hydrocarbons, together with a robust regime for cost-monitoring and control (particularly given the current high costs of the Nigerian petroleum industry). Stringent measures will be enforced to reduce industry costs, e.g. compelling joint-development projects, benchmarking individual project cost estimates against industry standards and refusing the development of uneconomic reserves.

A National Petroleum Policy Directorate will be created to provide technical support to the Minister with a strong focus on policy and strategic research in: (i) industry market developments; (ii) price movements/forecasts; and (iii) policy/regulatory initiatives. The Ministry will be staffed with a "senior person" to act as a focal point for (and provide oversight over) the implementation of the Policy and to ensure coordination among industry operators. Some Ministry personnel will be responsible for lobbying for gas projects and facilitating coordination between project developers and state agencies.

Unbundling and open access

Unbundling and open access are two of the most important aspects of the Policy, which are designed to promote a competitive wholesale market (a key end objective of the Policy). The Policy contemplates the legal unbundling of the different segments of the natural gas industry with separate and distinct licences permitting entry into the market. No single company will be able to hold direct interests in more than one segment of the gas-value chain. More specifically, ownership of gas infrastructure is "demerged" from its operation and trading (just as natural gas trading would no longer be conducted by the owner or operator of the pipeline network).

The trend in countries that have reformed their gas sectors is to separate trading from transportation and to have these activities conducted by unrelated companies. It is, however, necessary to recognise local conditions that might compel a departure from this practice as unbundling might not necessarily be ideal in a developing economy with various infrastructure challenges. The transport network, for example, being a regulated segment, would have the economics of its investment in a relatively new gas market enhanced by allowing the pipeline company to participate in network operations and supply businesses. State policy should focus on facilitating new entry by a robust mechanism for capacity allocation and definition of the rules of pipeline access for third parties (rather than unbundling and potentially adversely affecting the economics of grid investment). Appropriate regulation will be the key to monitoring vertically integrated entities, with market incentives designed to promote new entry in the supply business

and other segments of the market amenable to competition. The Policy should prescribe discretionary regulation capable of correcting any market distortions similar to the powers of OFGAS, the UK's gas regulator.

Unbundling exploration from production would also be a challenge to those concerned as upstream activities may fall within the category of operations where vertical integration continues to make a compelling economic case (especially in a relatively new sector). In addition, it not necessarily clear from a policy perspective why willing producers would limit themselves to marketing their production only through separate trading firms.

One of the immediate consequences of the new regime is the separation of NGC's merchant and transportation divisions into two separate companies—the Nigerian Gas Marketing Co (NGMC) and Nigerian Gas Processing & Transport Co (NGPTC). The Policy does not, however, necessarily advocate ownership unbundling, therefore permitting the acquisition of indirect interests in other segments of the industry through affiliates.

The Policy promises open access that seeks to "open up" pipeline capacity to third parties on a necessarily "open" basis and is therefore fundamental to encouraging new entry. Given that the author's advised natural gas regime is one that allows some cross-ownership of gas interests, a degree of oversight will be required to ensure that aligned commercial interests do not frustrate TPA. Open access will be governed by a network code that will contain matters relating to gas pipeline pressure, gas specifications, metering and other technical details.

Pricing

Traditionally, well-head prices for natural gas for the local market have been maintained below economic levels. The Policy retains state oversight on natural gas pricing and the distinction between prices for DGSO and non-DGSO volumes.

Unlike under the earlier 2008 Policy, the current Policy excludes wholesale gas from DGSO volumes. Wholesale gas pricing applies to non-DGSO gas traded by producers that have met their DGSO quota. Although there are signs of a maturing wholesale market, economic regulation will continue for wholesale gas pricing by indexing this to the EPP applicable in LNG trade. The EPP is the average export market price less the costs of liquefaction, shipping and re-gasification. It is expected to improve domestic gas volumes by removing the incentive for LNG exports. While the EPP represents a more realistic pricing methodology than the former DGSO pricing regime applicable to wholesale gas, it remains to be seen whether it provides sufficient motivation for improving domestic volumes (having regard to the opportunity cost of domestic supply being unused LNG infrastructure). As a result, a producer's "loss" for any local deliveries would include not only the unrecovered cost of the LNG facilities but also forgoing a return on each segment of the LNG value chain. Clearly, revenues from local supplies cannot compensate for this particular loss. Price oversight will therefore remain until a competitive wholesale market comes into force at which point market forces will determine prices.

In line with standard practice, various "monopoly" elements of the industry, which (with the exception of the upstream segment) include all infrastructure businesses (such as LNG liquefaction), gas storage/processing and pipeline transport, will remain under economic regulation with a tariff jointly developed by the regulator and industry participants. The expectation is that the tariff would ensure recoupment of eligible costs, together with an acceptable return on investment.

Wholesale market competition

The Policy contains a number of proposals designed to encourage wholesale market competition. First, new entry is promoted with the licensing as suppliers (of trading units of upstream producers and specialised wholesale traders) that can generate cost-saving benefits by aggregating supplies. This increases the likelihood of competition, which is necessary to bring down gas prices. Secondly, open access is facilitated by the separation of gas marketing from transportation with separate and distinct licensing as a result of which no single entity can directly participate in both segments of the industry. Thirdly, wholesale market transactions relate to non-DGSO volumes and would be conducted on a "willing buyer/willing seller" basis outside GACN regulation but subject to EPP pricing. Fourthly, suppliers can trade physical gas among themselves, thereby opening up opportunities for the more efficient allocation of gas resource. Supplier-to-supplier transactions may arise from the need for a supplier to remain "in balance", having previously extracted more gas than it moved into the pipeline (or where end-user default leaves a supplier with stranded gas reserves). Gas resale enhances the scope for the development of a "spot market" with prices that are more closely aligned with the economic value of the commodity at the time of the transaction. Gas swaps are also recognised as a commercial arrangement that market participants can adopt to "hedge" their financial exposure.

A competitive wholesale market is defined in the Policy as one with price reference points, large volumes and many buyers/sellers. The market will be declared "in existence" by the Minister when any of the following events occur:

- completion of sufficient parts of the planned national gas infrastructure and, in particular, the crucial OB3 Pipeline that connects the eastern/western transport networks;
- when not less than 2bcf/d is moved through the OB3;
- when Oben (i.e. Ajaokuta grid offshoot) becomes a physical gas hub moving not less than 2bcf/d;
- when domestic gas exceeds export volumes; and

- when there are sufficient numbers of wholesale traders.

It is key that the parameters for assessing progress on the introduction of competition demonstrate a clear perspective on the requirements for market deregulation. It should also be noted that local gas trade will inevitably exceed export sales only when the former promises sufficiently higher returns than the latter. Also, although OB3 is a critical link infrastructure, competition can still exist in its absence. The construction of OB3 should, in fact, be market-driven—the disconnection of the two regional pipeline systems representing grid investment opportunities in a bustling gas market.

DGSO and GACN

The Policy maintains DGSO, specifying that compliance with this is a factor in the renewals of upstream licences. DGSO continues to be relevant given the growing gas demand for power generation and gas-based industrialisation. However, the somewhat challenging payment record of DGSO gas buyers continues to work against the continuance of this measure. Concerning DGSO pricing, a revised National Domestic Gas Supply and Pricing Regulation is expected soon. It is important that provision is made for DGSO "volume risk" where DGSO gas accumulates in the hands of the wholesale purchaser because of insufficient demand, thereby causing something of a "glut" in the wholesale market, reducing prices and adversely affecting the gas investment profile. There are, in fact, large volumes of DGSO gas that are currently tied into several industrial projects that are yet to come on stream (in some instances, many years after the original gas purchase orders were secured). An option is to return excess DGSO gas to the producer that can sell this and to recognise a DGSO credit in favour of the purchaser.

Under the 2008 Policy, GACN was responsible for setting commercial terms for DGSO gas contracts in line with its statutory obligation of ensuring the compliance of natural gas deals with the approved pricing framework. As is observed in the Policy (and by the author), GACN is not, however, compatible with the promotion of downstream choice. It should therefore not be retained given that its wide regulatory powers could impact on freedom of choice (a factor relevant to wholesale gas market liberalisation).

Fiscals

Because of its lower prices, gas tends to have a much slower rate of return than liquid hydrocarbon, which necessarily lengthens the "break-even point" for gas projects. However, to encourage utilisation of associated gas and reduce gas-flaring, the current fiscal regime allows for the recovery of gas costs from oil incomes (which has reduced investor appetite for non-associated gas development). To reverse this trend and boost stand-alone gas investments, the Policy seeks to remove incentives in the tax system that currently favour associated gas.

Under the Policy, the fiscal regime would be designed in line with the Fiscal Rules of General Application (the FRGA), which seek to ensure that the inflow of state revenue commences on production. In addition, the FRGA aims to generate for government progressively higher levels of income as investment profitability expands. Royalty is a common production "levy" that guarantees early revenues and policy-makers are proposing reduced rates to attract investments. With regard to increasing the ratio of the government's share from so-called windfall gains, there are at least two ways of achieving this: a higher than standard rate of tax and a progressive profits tax (PPT). A higher than standard rate tax can either be another levy, in addition to the traditional income tax (as was the case with the UK Continental Shelf fiscal regime where a Supplementary Charge was introduced that would increase the state's share of windfall profits arising from sudden spikes in oil prices) or a tax with what has been described as an exceptionally high rate (similar to the reported fiscal effects of the Indonesian PSC). A higher than standard tax is usually a scheme that enables resource states to share windfall gains from mineral exploitation. However, this is not necessarily a tax on economic rent and therefore is not aligned with the proposals in the draft National Petroleum Fiscal Policy that aim for a neutral tax regime for natural resource projects. Also, an exceptionally high rate is not necessarily appropriate for the development of marginal deposits.

PPT is the corporate equivalent of the personal income tax regime that taxes higher incomes at correspondingly higher tax rates. This is usually incorporated in an income tax regime with the aim of correcting a challenge with conventional income tax where the government's rate of recovery is not responsive to oscillating levels of project profitability. PPT presents a more palatable option than using a higher income tax rate to capture windfall profits as this produces less deterrence to investment. In addition, PPT does not de-incentivise marginal developments because of its less adverse impact on the marginal tax rate.

The Policy acknowledges that progressive tax systems promote fiscal stability as they possess inherent flexibility that can accommodate changes in costs and prices, meaning that it is no longer necessary for the state to intervene (which can sometimes create investment uncertainty). Under the Policy, tax instruments for gas projects will include corporate income tax and a hydrocarbon tax. Unlike the standard income tax, which taxes accounting profits, hydrocarbon tax is a tax on rent. Although only accounting costs are accepted for deduction under the regular income tax system, rent tax "kicks in" only after resource investments are repaid, together with a minimum rate of return below which the project becomes uneconomic.

Infrastructure

The Policy promises a review of the Gas Master Plan to ascertain the level of infrastructure progress, identify new infrastructure needs and upgrade current facilities. The Gas Master Plan will be upgraded to an infrastructure blueprint that will identify "resource clusters" and necessary infrastructure, prioritising infrastructure development. This blueprint will be consistent with the Gas Resource Management Plan, which will, of itself, serve as a gas portfolio that identifies locations with gas reserves, infrastructure requirements and markets. The blueprint will also subject the licensing of infrastructure delivery to an economic evaluation of the benefits. Where gas distribution facilities are developed, the developer would be entitled to exclusivity in the retail sale of natural gas through a licensed marketing affiliate for a period sufficient for it to recoup its investments, together with a competitive rate of return.

PSC gas

Currently, PSCs are Nigeria's highest hydrocarbon producing arrangement and have overtaken JVs (which have been reported to have experienced funding issues). Consequently, PSCs are responsible for the majority of associated gas production but without specific provisions relating to natural gas. In other words, a framework for gas development is appropriate. The first PSCs were signed in 1993 with some achieving "First Oil" in 2005; however, it is only recently that relevant policy is recognising the significant potential that this petroleum arrangement holds for the country. The Policy promises a Gas Development Agreement that will address the contractual and fiscal issues in deep-water gas operations. Taking account of the potential hazards and significant capital intensity of investments in deep off-shore projects, it may be necessary to attract gas investments with the kind of tax incentives that PSC oil currently enjoys. Also, policy should encourage placing LNG projects in deep-water installations to reduce the cost of transporting natural gas onshore. Project economics can be improved with the use of FLNG to liquefy natural gas from offshore installations, thus enhancing economics of scale.

LNG

The immediate outlook for Nigeria's LNG is somewhat challenging. As the present LNG "glut" threatens to weaken supply economics (adversely impacting on investment), significant LNG projects in Australia and the Americas are causing a decline in Nigeria's market share. The USD34b Ichthys LNG, Australia's landmark gas investment, and the Pacific LNG will bring greater cost-effectiveness in supplying Asia Pacific. The US' net import position is expected to recede as its several LNG projects come on stream, including Cheniere's Sabine Pass Liquefaction Project and Freeport LNG. Demand in South America is covered by LNG sales from Trinidad & Tobago while, in the near future, Russia's Yamal LNG will move additional capacity into European markets as Indonesia's Tangguh LNG makes additional deliveries to Asia Pacific.

However, the Policy predicts that Nigeria will continue to supply Europe and South America where it hopes to make up any shortfall in Trinidadian LNG (and in the Far East in competition with supplies from more proximate LNG projects). Nigeria's location creates for it a disadvantage with respect to these global LNG markets, for which reason long-term sales commitments should be secured before expanding NLNG's capacity or developing new LNG projects. It is important that the Policy sets out medium- to long-term goals, e.g. consolidating Nigeria's asserted regional prominence by becoming a hub for natural gas supply in West Africa and promoting the domestic use of LNG (which will require formulating a pricing mechanism that guarantees fair and reasonable prices for producers and consumers). The Policy expresses government resolve to realise more value from LNG trade by retaining ownership of its equity gas from upstream extraction to the downstream sector of foreign markets. It remains to be seen how securing the long-term sales commitments required for LNG projects will work with the government's resolve.

Domestic gas utilisation

The Policy promises a Gas Resource Management Plan that will identify low-cost gas for delivery to the local market and emphasise domestic consumption as the central objective of project development. It is currently not possible for local markets, affected by insufficient demand and payment issues, to underpin investments (the size and scale of gas projects) when an export-oriented outlook continues to provide better returns. The Policy seeks to encourage gas projects designed to serve "specific demand clusters" or "anchor customers". The objective is to encourage concentration of gas-based industries and businesses within specific locations that can more economically be connected to gas supplies.

Policy-makers have argued for government intervention to initiate CNG market penetration. An appropriate means of achieving this would be for the state to provide incentives for vehicles that switch to CNG, e.g. creating specific road corridors for them to use similar to the strategy for promoting the use of electric vehicles in some western societies. The BRT (Bus Rapid Transit) dedicated lane in Lagos State provides existing infrastructure for test-running this policy.

LPG holds a significant prospect for natural gas development. However, its market spread is somewhat limited in spite of various interventions and the pricing/environmental advantages over kerosene—its main rival. The perception, however, that LPG is a commodity for the wealthy, together with fears about its safety, affect its growth. State policy should therefore focus on a grass-roots campaign to promote acceptance of LPG.

Local content

The Policy acknowledges that technical training is a means of providing competence and also advocates quality academic training through foreign undergraduate and postgraduate education (and by improving the standards in Nigerian universities). The Policy recognises the need for a Competency Development Framework that facilitates the acquisition of local expertise under a system that promotes supervised practical experience for graduates and apprentices in the industry. Petroleum companies are expected to participate in this process complemented by state departments and agencies with the requisite competence.

Gas flaring and re-injection

The Policy asserts the government's priority in the commercialisation of flare gas and restricting gas re-injection to only necessary cases. Flare gas is not only a concern for the environment—it is also an economic waste. For that reason, state policy should effectively insist that this practice is discontinued either by provisions that stimulate projects for alternative uses of flare gas or by imposing penalties designed to adequately compensate the state for the lost resource. The government's plan to utilise flare gas for power generation may work if investors are sure of recouping their original capital outlay, together with an acceptable return on their investment. It is also important that, moving forward, clear (and enforceable) rules are established for new gas projects where production is only licenced on provision of a gas development plan.

Conclusion

The Policy demonstrates an understanding of the key challenges of Nigeria's gas sector and, subject to some minor adjustments, provides a robust blueprint for tackling them. Adjustments would include re-defining the parameters for wholesale competition so that they would facilitate, rather than discourage,downstream choice. Finding other markets for the country's natural gas by encouraging domestic consumption and stimulating regional attention is crucial, just as it is necessary that vertical integration be permitted for the infrastructure aspects of the industry. A statutory framework for natural gas investment and development has also become compelling. Hopefully, the proposals in this article will be considered when designing the legal regime that will regulate the country's natural gas sector.