



A CONSIDERATION OF THE CONSTRAINTS TO FULL REALISATION OF THE OBJECTIVES OF THE NATURAL GAS POLICY (2003) AND THE DEVELOPMENT OF THE NATURAL GAS SECTOR IN NIGERIA

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ABSTRACT

Although a gas policy, the National Gas Policy, NGP, (2017) approved by the Federal Executive Council on June 28th 2017 is now in place in Nigeria, ostensibly to replace the natural gas policy contained in the National Energy Policy, NEP, (2003), it is but an improvement on the former. The fundamental objectives, which are that, the nation's gas resources shall be harnessed and optimally integrated into the national economy, energy mix and industrial processes; the nation shall engage intensively in gas exploration

Introduction

In spite of Nigeria's abundant gas resources, with its proven reserves put at 187 trillion cubic feet, tcf (*Energy Information Administration, EIA, January, 2015*), the country is experiencing a full-blown energy crisis. The easy days of past years, when the country enjoyed a very benevolent international environment with high prices and growing markets, are over (NGP, 2017). It has therefore become necessary and right for Nigeria to develop her vast natural gas deposit to service her ailing economy, strengthen regional cooperation and meet expanding demands in world market (*Alawode, A.J. & Olusegun A Omisakin, 2011*). Alawode, *et al* noted further that gas has some positive macro-economic implications for Nigeria as its dependence on oil reduces, and since oil accounts for over 90% of the country's foreign exchange earnings and also that there is said to be more of gas reserves in energy terms than oil, then an increased demand for gas would hold more favourable potential for increased national and per capita incomes.

In an effort at developing the gas sector, the federal government churned out policies and laws to regulate the sector. One of such was the *National Energy Policy (2003)* made available through the *Energy Commission of Nigeria, ECN* and which contained the policies of the country's various energy resources including natural gas. The policy provides that, "the



and development with a view to increasing the reserve base to the highest level possible; the nation shall put in place necessary infrastructure and incentives to encourage indigenous and foreign companies to invest in the industry, and that the nation shall put in place necessary infrastructure and incentives to ensure adequate geographical coverage of the gas transmission and distribution network, still form the bedrock on which the present policy is hinged. For instance, the just-approved policy is intended to, among other things, remove the barriers affecting investment and development of the sector, with a view to making Nigeria “to be an attractive gas-based industrial nation, giving primary attention to meeting local gas demand requirements, and developing a significant presence in international markets” (NGP, 2017). The specific objectives of the study are to: assess the extent of the implementation of the four fundamental objectives of Natural Gas policy (2003); identify the barriers to the full realisation of The Policy; consider factors that could help to improve the situation of policy implementation in the gas sector, and examine the role of the regulatory framework on the issue of natural gas policy implementation with a view to investigating the development of the natural gas sector in Nigeria. The study findings revealed that, government’s dual status (of operator and regulator at the same time) is a major constraint to the full realisation of the natural gas policy in Nigeria. The study concluded that, until regulatory frameworks within the sector are strengthened and government acquired the needed political will to effectively regulate the sector as expected, the said policy will continue to be a piece of valueless document. The barriers to the full realisation of the objectives of the natural gas policy, and the ultimate development of the gas sub-sector, despite the policy renewal, and viewed from international and domestic environments, governance angle, legislative and regulatory perspectives as well as sector structure, formed the focus of this study.

Keywords: National Gas Policy, National Energy Policy, Gas Master Plan, Gas Value Chain, Gas Flare reduction, Gas Utilisation, Gas Infrastructure.

nation’s gas resources shall be harnessed and optimally integrated into the national economy, energy mix and industrial processes; engage intensively in gas exploration and development with a view to increasing the reserve base to the highest level possible; put in place necessary infrastructure and incentives to encourage indigenous and foreign companies to invest in the industry , and also put in place necessary infrastructure and incentives to ensure adequate geographical coverage of the gas transmission and distribution networks” NEP 2003).

In a nutshell, the policy addresses issues of harnessing the nation’s gas resources, gas exploration, gas infrastructure and geographical coverage of gas resources. This policy was at conception, intended to achieve seven points’ objectives, which are to: eliminate the flaring of associated gas by 2008; expand the utilisation of natural gas as industrial and domestic fuel, as well as for power generation; increase the use of natural gas as industrial feedstock for petrochemical, pharmaceutical and fertilizer plants, etc; use gas



to diversify the foreign exchange earnings base of the nation; accelerate the process of technology acquisition and diffusion in the gas industry; encourage indigenous entrepreneurial capability in the gas industry, including the development of end-user devices; and determine the level of gas reserves available to the nation (NEP, 2003). Frantic efforts have been made by government towards the realisation of these objectives. For instance, the *National Gas Master Plan (NGMP,2008)* which was government's initiative at bringing about private sector involvement towards an effective working of the production, transportation and supply of natural gas both to end-users and for exports was put in place. Various instruments including economic measures, information and education, legislative measures and international arrangements have been put in place and incorporated within the policy itself in order to achieve the stated objectives. Yet, much still need to be done as the sector is still grossly undeveloped. This paper therefore researches into factors bedeviling the gas sector in Nigeria and how these has constituted constraints to the full realisation of the stated objectives of the natural gas policy and the general development of the gas sector in Nigeria.

Literature Review

Despite holding a global top-ten position of proven natural gas reserves, Nigeria produced 1.35tcf of dry natural gas in 2013, ranking among the world's top-thirty largest natural gas producers. According to a United States' EIA Report, *Country Analysis Brief: Nigeria (February, 2015)*, dry natural gas production in Nigeria grew for most of the past decade until Shell declared a '*force majeure*' on natural gas supplies to the Soku gas-gathering and condensate plant in November, 2008. There is a significant potential for reserves growth with focused gas exploration. The reserve potential of natural gas in Nigeria has been put at up to 600tcf, which will make Nigeria the 4th largest gas reserve owner after Russia, Iran and Qatar. However, the country losses between 35-39% Gigabit watts of this gas deposit to flaring. This practice of gas flaring has all along been a major constraint to the full realisation of the natural gas policy as well as overall development of the gas sector in Nigeria. Okorie (2010) submits that the gas flared in Nigeria was sufficient to generate 15GW of electricity: this is a country with 6GW of installed capacity with only 3GW of available power generation. Apart from being wastage of valuable resources, this practice runs contrary to Nigeria's obligation to reduce greenhouse gas (GHG) emissions under *inter alia*, the 1992 *United Nations Framework Convention on Climate Change* and the 1997 *Kyoto Protocol (Malunfashi, G. I)*. Malunfashi contended further that Nigeria had been making concerted efforts, setting and shifting deadlines, towards ending the wasteful act of gas flaring. Farina (2010) writing for GE Energy on *Flare Gas Reduction* stated that the flaring of associated gas was a multi-billion dollars' waste, a local environmental tragedy, a global environmental issue and of course, an energy problem that can be solved. If this fact as put forward by Farina that the problem of gas flaring is solvable, it then means that more pragmatic steps are needed especially when government puts in place an independent and formidable regulatory framework.

The issue of regulation of the sector has been a major constraint to the full realisation of the objectives of the natural gas policy as well as the development of the gas industry in Nigeria. Regulation has been weak! A situation where government is both an operator



and regulator one can't expect more than what is being experienced presently: a situation where government is not able to control the International Oil Companies (IOCs) who break rules relating specially to issue of flare reduction, it shows the extent of weakness of the Commission. There had been recommendations for policy, legislative and regulatory interventions on accelerated development of Nigeria's gas sector (*Gbite Adeniji, 2014*). It is however cheering of course to report meanwhile that this three-point recommendation seems to have been granted especially with the approval of a *National Gas Policy* by the Federal Executive Council precisely on June 28th, 2017; the passing of the Petroleum Industry Governance Bill, PIGB (2017) by the senate joint committee, and provision within the PIGB of a proposal for the establishment of a sole regulator for the gas sub-sector to be known as *Nigerian Petroleum Regulatory Commission (NPRC)*. This sole regulator is intended to be a one stop shop industry regulator that will be responsible for licensing, monitoring, supervising petroleum operations, as well as industry laws, regulations and standards. However, two issues stand out clearly as aspects for cheap compromise and spell failure for the legislation. These are the granting of certain power of discretion to the minister of petroleum resources to do all such other things as are incidental and necessary for the performance of his ministerial functions, and that the commission could receive gifts. According to *Donna Obaseki-Ogunnaike (2016)*, the bill did not indicate the specific circumstances in which such ministerial discretion may be exercised or necessary. This, according to him, may give rise to arbitrary exercise of power by the minister. On the provision empowering the Commission to accept gifts, though with a proviso, 'provided that such gifts are not accepted from persons/entities that are regulated by the Commission', Obaseki-Ogunnaike opined that this may raise a question on transparency of processes and true objectivity in the Commission's regulatory functions.

But if the required policy, legislative and regulatory framework is put in place, without commensurate efforts on the part of the stakeholders to effect implementation, the problems are not yet solved. Though a sole regulator has been proposed to be established for the industry, except and until the dual status of government, where it is both an operator as well as regulator in the gas value chain is removed, the documents will go the way of others before it: lack of implementation. The previous policies on natural gas, particularly those for flare reduction are not effective due to defects in their implementations, stemming from weak regulation, lack of political will, and of course the attitude of the implementers of policy, especially their disposition to particular policies are direct concomitants of weak regulation.

Furthermore, the gas sector has a lingering constraint of inadequate processing and transportation infrastructures. As a matter of fact, flaring and venting of associated gas is considered an option because the infrastructures needed to process associated gas for sales are not readily available or are rather inadequate. Rather than treat it as an equally important revenue resource as oil, the IOCs simply see gas as an unnecessary by-product of oil and the best they feel they could do under the circumstance was to burn them off so as for them to access oil which is what they came to Nigeria to invest in. The third and fourth planks of the NEP (2003) states that, 'the nation shall put in place *necessary infrastructure and incentives to encourage indigenous and foreign companies to invest in*



the industry', and 'the nation shall put in place necessary infrastructure and incentives to ensure adequate geographical coverage of the gas transmission and distribution networks'. On the subject of the use of penalties to deter oil companies from engaging in gas flaring, Abegunde (2016) suggested a deliberate government effort at encouraging these companies to see the investment potentials in natural gas and then begin to process it for sales rather than considering it as what should be wasted.

Gbenga Oyeboode & Kofo Dosekun (2006) of Aluko & Oyeboode among other contributors to a publication, "Gas Regulation: A Practical Insight to Cross-Border Gas Regulation" stated that, Nigeria's gas infrastructure comprising approximately 1,100km of pipelines, 7 gas systems and 14 compressor stations with an installed capacity of 2.1bcf per day and 13 export terminals has been constructed by the Nigeria Gas Company (NGC) Ltd, a wholly owned subsidiary of NNPC. Multi-national companies have also obtained licenses and constructed pipelines to supply their individual gas utilisation projects. These pipelines run from the gas fields to the project site or as is the case of distribution lines for the downstream, from the factory gate to the end-users. They contended further that, the country's gas pipeline infrastructure was largely situated in the southern part of the country with no interconnectivity around central and northern Nigeria. Oyeboode *et al* stated that, the condition of the pipelines varied from good, for the few recently constructed systems to extremely poor for older systems.

Richard Fullenbaum, James Fallon & Bob Flanagan (2013) examined twenty asset classes in the assessment of oil and gas transportation and storage infrastructure investment. The first ten related to natural gas and is as follows:

- Natural gas gathering
- Gas processing
- Natural gas pipelines
- Natural gas storage
- LNG processing
- LNG marine
- NGL & LPG Processing
- NGL & LPG Pipelines
- NGL & LPG Storage and Rail
- NGL & LPG Marine

No doubt, to provide adequate gas processing and storage infrastructures is capital intensive and therefore a major challenge which should be tackled if the present move to transform the gas sector is to yield the desired results. This calls for real injection of fund into the sector as well as collaboration of government with the JV Partners to make these infrastructures available. Related to the issue of infrastructure is that of incentives both to encourage indigenous and foreign oil companies to invest in the industry as well as ensure adequate geographical coverage of the gas transmission and distribution networks (NEP, 2003:14). Perhaps a remote cause of continued flaring despite several efforts at its reduction is the fact that the oil companies are not adequately encouraged.



Meanwhile, *The Associated Gas-Framework Agreement (AGFA)* was introduced in 1992 as a package of fiscal incentives for natural gas utilisation. These incentives include:

- Tax Holiday for three years
- All investments necessary to separate oil from gas from reserves into suitable production is considered as part of the oil field development.

Since then, the contractual relationship between the government-owned oil company, the Nigerian National Petroleum Corporation, NNPC, and multi-national oil companies, MOCs, have been based on Memorandum of Understanding, MoU, which is reviewed regularly (ICF *International*, 2006). This document stressed further that, it was within this legal framework and Nigeria's realisation of the importance of a viable gas industry that some major gas projects such as Oso Condensate project, Escravos gas project, Liquefied Natural Gas, LNG, project and West African Gas Pipeline projects were initiated. But the reality on ground whereby gas flaring had continued unabated, leaving behind devastating effects on the health and environment of local inhabitants of the areas where the burning goes on every day, does not show that this legal provision was effective. Furthermore, in 1998, government provided additional incentives for investment in economic utilisation of flared gas. These fiscal incentives include:

- Gas projects taxes at 30% versus 85% for oil projects
- Capital expenditures for gas projects chargeable under Petroleum Profit Tax
- Tax holiday of 5 to 7 years
- Exemption on custom duties and Value Added Tax, VAT, on gas related development equipment.
- Investment capital allowance of 15%
- Interest deductibility on loans
- Dividends during tax holiday are tax free.

Before now, it has been the case of lack of an encompassing gas utilisation bill that covered gas production, transportation, distribution and flaring into law. With the new gas policy just approved, June 28th 2017, now in place, as well as the PIGB also passed by a joint committee of the senate of the Federal Republic of Nigeria, developments should begin to attend to the sector, provided the stakeholders particularly government, are willing and poised to ensure their effective implementation.

Corruption is the next major constraint to the full realisation of the objectives of the natural gas policy in Nigeria. The new NGP (2017) is intended to remove the barriers affecting investment and development of the sector, and will be updated periodically to ensure consistency in government policy objectives at all times. The Policy stated further that, government shall abide by its provisions unless and until reviewed or replaced by a formal restatement of policy duly gazette by the government. On the issue of corruption, what is needed is more of value re-orientation than policy direction. Previous policies and legislations failed not because the legal and policy instruments were defective, but because, one, their implementers placed personal interest above public interest. Secondly, at one point or another, set of privileged class of society have refused to be



bound by their provisions. So, you find out that most of the time the makers of law become their breakers. The thing called corruption is an act of taking undue advantage over others. It is a behavioural thing and policies, legislations or regulations can hardly check this, except there are monitoring bodies independent of government to enforce compliance and ensure probity, transparency and accountability. *Effiong (2013)*, citing *Egonmwan (1991)* mentioned that corruption goes with power, and as such must be located first within the ranks of the powerful. He identified corruption as being responsible for cost escalation of government projects, as government contracts had always been conduit pipes for making quick and easy money by government officials and contractors in Nigeria. Not following transparent and due processes, an aspect of corruption, is the in thing in Nigeria. *Makinde (2005)*, *Ikelebge (2006)*, *Effiong (2013)* and *Ugwuanyi et al (2013)* are unanimous on the fact that policies suffer implementation when their implementers do not have favourable disposition towards them. In other words, they pursue to quick implementation only those policies which, strictly speaking, are of benefit to them as individuals in their own rights.

Gas pipelines vandalism is another barrier to the full realisation of the objectives of the natural gas policy and the holistic development of the gas sector. Writing on *Causes and Effects of Pipeline Vandalism*, *Omawumi Eyekpimi (2016)* quoted from the Legal Dictionary thus: *vandalism is an intentional and malicious destruction of or damage to the property of another; because this poses a threat to society, it is deemed a statutory offense and a crime.* Over the years, there have been recurrent issues over pipeline vandalism in different parts of the country, especially in the Niger-Delta region translating into financial losses to the country, sometimes running into billions of naira. Given an estimate of the losses incurred by pipeline vandalism, the NGC, the gas transportation arm of the NNPC said that an average of 200million standard cubic feet (mscf) of natural gas production and supply was lost each time its Escravos-Lagos Pipeline system (ELPS) was sabotaged at any of its points. Writing on *The Pointer* newspaper of Saturday September 9th 2017 on the topic *Pipeline Security Contracts: The War Against Pipeline Vandalism*, Ruth Okwumbu wrote that, going by the reviewed pricing regime of \$2.80 per mscf for natural gas to Nigeria's electricity industry, gas suppliers in the country may be losing an average of #112million (\$560, 000) daily revenue on deferment of gas production and supplies to power plants due to pipeline breaks. This, however, is the first of the ripple of effect caused by pipeline vandalism. This results in the security of the gas resource and loss of revenue. Amidst all these, the FGN decided to treat security of pipelines as a national security issue – thus was born The Pipeline Security Contract – the aim being to, as it were, kill as many birds as possible with the same stone; engaging the youths of the local communities where the pipelines are situated in the job of securing the pipelines; thus, reducing unemployment and protecting the golden egg of the nation's economy. This security of especially the gas pipelines has to be intensified for it to give effective results.

Opinions are however divided among gas experts. *Ndubisi Harmony (2016)* of the NGC holds the view that vandalism is usually done in ignorance. He stressed that vandals come with the mind of meeting the resource in the pipelines like its oil counterpart, and “if the vandals know that they will not meet gas in the pipelines, they probably may not embark on such efforts”. But *Engr. Ibrahim (2016)* of Dangote Cement Manufacturing Company



holds a contrary view to that of Ndubisi on this. He opined that, vandalism was actually planned and intentional. According to him, vandals actually break the gas pipelines in search of *Condensates* which holds great revenue potentials. *Abegunde (2016)* a Political Scientist equally disagreed with Ndubisi Harmony's view that gas pipeline vandalism was an unintentional act. Rather, he feels it may even be a sabotage act against an administration. He concludes that whether intentional or not, the pipelines are destroyed in the process, and when this happen, the gas transmission and distribution network is disrupted, the effect of which among other things is an underdevelopment of the gas sector resulting in non-realisation of the objectives of the natural gas policy.

Methodology

One hundred and twenty-five (125) questionnaires were administered to respondents on the study target in the area studied. This figure, which is the sample size, represents 25% of 500, the research population. In course of collation, 95 copies were retrieved, representing 76% of the sample size above. Apart from questionnaire administration, 20% of the sample size, 25 respondents from the gas, power sectors, regulatory agency and the general public, were interviewed to illicit information to complement the ones obtained through questionnaire administration. The justification for the selection of this class of people for interview is hinged on a perceived relative exposure and knowledge of developments in the gas sector. The study also made use of secondary sources of data collection such as books, journal articles, internet sources, periodicals, and other relevant publications on the gas sector. Descriptive and Content analyses were used as the study's methodological orientation.

Discussion on Findings

The study finding reveal that, government's dual status (of operator and regulator at the same time) is a major constraint to the full realisation of the natural gas policy in Nigeria. This point is agreed to by 87% of respondents. *Dr. Momoh (2016)* contends that the gas sector should be made to enjoy independence like the Independent National Electoral Commission (INEC) which has absolute freedom on electoral matters in Nigeria. Respondents (73%) strongly agreed that government stand to gain added political will once it disengages as operator and take steps to strengthen the DPR, the regulatory agency. However, if government really wants to engage in the gas market, it should with the mind of making gas to replace oil with gas as foreign exchange earner for the country. As a matter of fact, the spirit of the NEP (2003) was to undertake major investments in the gas sector in order to prepare adequately for gas as a substitute for oil both for domestic needs and foreign exchange earnings. (NEP 2003). But with this present government's dual status this may obviously not be realised. The MOCs have a sluggish response compliance to the flare reduction policies because they see the government which is issuing the directive as equal players and possibly involved in the same act of flaring. It thus becomes difficult for them to take government serious. Furthermore, government has not been able to compel oil companies to comply with the laws and policies of gas flare reduction or outright cessation. Terminal dates have continued to be



shifted and nothing done to defaulters. 2008 was the celebrated end date for gas flaring in Nigeria. Till date gas venting and flaring have continued.

Rather than being an active player in the gas market, government should strengthen institutional and regulatory frameworks, put strategies in place for the actualisation of the initial FOUR fundamental objectives of the policy, especially harnessing the nation's gas resources and encouraging local and international investors to invest in the industry. Government should also reduce its involvement in regulating the sector. Rather, the Directorate of Petroleum Resources (DPR) should be allowed free hand to operate and made independent.

Concluding Comments

The Nigerian gas sector has not been developed because government is yet to get its bearing on it. At best it has been paying lip service to its development. Its commitment to its development is grossly inadequate. As such, there is no deliberate effort at seeing to the full implementation of the enabling policies. The attitude and disposition of policy implementers to particular policies is another factor affecting the full implementation of the objectives of the natural gas policy. *Makinde (2005)* opined that policy implementers tends to be more favourably disposed to giving quick implementation to policies that directly benefits them. This view point was agreed to by 67% of those surveyed.

However, to achieve this goal of a holistic development of the gas sector to the level of it being a foreign exchange earner among others, requires a massive injection of funds to the sector in form of budgetary review in favour of the sector. If gas transmission infrastructure is made available, oil producers will gradually disengage in the act of gas flaring and begin to prepare gas for the market rather than burning it. Natural gas is useful for power generation, cement manufacture, fertilizer manufacture, aluminum smelting, export and other domestic uses.

Recommendations

This study considers the following suggestions both fit to help alleviate the visible constraints to the full realisation of the natural gas policy as well as for further research:

- ❖ Government should drop its dual status and hold on to a single one preferably of a regulator
- ❖ There should be a determined effort to fulfill the initial four fundamental promises on the sector, namely, to: harness the nation's gas resources..., engage intensively in gas exploration and development with a view to increasing the reverse base to the highest level possible; put in place necessary infrastructure and incentives to encourage indigenous and foreign companies to invest in the (gas) industry, and put in place necessary infrastructure and incentives to ensure adequate geographical coverage of the gas transmission and distribution network (NEP,2003). These however becomes fulfilled with a judicious implementation of the enabling policy.
- ❖ There should be a deliberate move to actually encourage oil companies to invest in the industry as indicated in the policy. This will go a long way in not only ensuring a gradual reduction of the act of gas flaring but also ensure an



equally gradual development of the gas sector and an eventual contribution to overall national economic development.

- ❖ It is not enough to formulate policies. They should be monitored to level of implementation.
- ❖ Serious consideration should be given to the issue of substituting oil with gas both for foreign exchange earnings as well as for local utilisation.
- ❖ Oil companies who default on any aspect of the requirements of the policy should be sanctioned. In other words, punishment stiffer than fine imposition, should be meted on companies that fail to comply with the provisions of the policy.
- ❖ The DPR should operate independent of especially the executive. Only an independent regulator will give the sector the needed control and regulation for an eventual sectoral development.

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