



## ABSTRACT

While the practice of gas flaring remained a major menace in the natural gas sector in Nigeria, though recent government efforts of government have brought about some reduction of a sort, the provisions of the National Energy policy for a phase out are far from being achieved. The focus of the National Gas Policy seems to be on how the practice could be commercialised for economic advantage, hence the Nigerian Gas Flare Commercialisation Policy. The study thus reviewed the National Gas Policy's position on gas flaring and reasons behind the sluggish response of Multi-national Oil Companies to the flare reduction policies in the nation's gas sector. This is done

# THE NIGERIAN GAS POLICIES, GAS FLARING AND CONTAINMENT OF THE EXCESSES OF THE MULTI-NATIONAL OIL COMPANIES ON FARE REDUCTION.

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## Introduction

Though Nigeria is regarded as a gas province with some oil in it, little effort has actually been made to undertake exploration for gas. As a result, a significant proportion of Nigeria's gas was discovered incidentally during exploration for oil. In 2015, gas production was just 29% of oil production and reserves production ratios were 46 years for oil against 102 years for gas (reserves production ratio is a measure of how strenuously reserves are being exploited).

The National Energy Policy, NEP (2003) provides inter-alia, that the gas policy was mainly to facilitate an economically optimal strategy of replacing oil with gas and gas derivatives. This policy provides that, the nation's gas resources shall be harnessed and optimally integrated into the national economy, energy mix and industrial process; the nation shall 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 to ensure adequate geographical coverage of the gas transmission and distribution network.

On the issue of gas flaring, the NGP (2003) focus is to either totally phase it off or at worst reduce the incidences of its occurrence. Hence, certain phase-off dates, such as 2008 were agreed to between government and the players within the gas value-chain. But none of these dates were kept.

However, frantic efforts were made by successful administrations to actualise certain aspects of the four-folded policy planks above. For instance, from 2008 to 2015 the policy of the Government was to



with a view to identifying the factors affecting the development of the gas sector in Nigeria, especially how these serve as discouragements to investment in the sector. The study finding revealed that, the policies have not achieved much at curtailing the excesses of Major Oil Companies (MOCs) on gas flaring mainly due to government's dual status of being both an operator and regulator within the gas value-chain. As such, foresees possible hitches in the achievement of sustainable development in the nation's gas sector. Furthermore, with the focus of the NGP (2017), flaring activities may continue as long as government is deriving enormous benefits from the practice. The paper concluded that only a truly independent and an empowered regulator can compel players in the sector to comply with rules especially on natural gas flaring activities.

**Keywords:** National Gas Policies, Gas Flaring, Multi-national Oil Companies, Fare Reduction, Sustainable Development.

harness Nigeria's vast gas resources based on the *Gas Master Plan (GMP)*, which outlined the objectives and aspirations of the nation with respect to its gas resources. However, with minimal investments made in the gas sector over the period, the Plan has not delivered on all its set targets. For example, Nigeria still lack critical gas infrastructure and incentives and continues to fall short of domestic gas supply obligations. Consequently, the notorious human activity, gas flaring and venting, has continued despite extant laws and policies to address its reduction or outright phase off.

The National Gas Policy (2017) which builds on the policy goals of the Federal Government for the gas sector as presented in the 7 Big Wins initiative ([www.7Bigwins.com](http://www.7Bigwins.com)) developed by the Ministry of Petroleum Resources (MPR) and the National Economic Recovery & Growth Plan, ERGP, (2017 – 2020), is intended to remove the barriers affecting investment and development of the sector. The policy is expected to be reviewed and updated periodically to ensure consistency in Government policy objectives at all times. Furthermore, government is expected to abide by the provisions of this policy unless and until reviewed or replaced by a formal restatement of policy duly gazette by it.

*The Vision of the NGP (2017)* is: "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"; while the Mission Statement is: "to move Nigeria from a crude oil export-based economy to an attractive oil and gas-based industrial economy". This gas-based industrialisation will be driven by some *core principles* which includes to:

Separate the respective roles and responsibilities of government and the private sector;

- Establish a single independent petroleum regulatory authority;
- Implement full legal separation of the upstream from the midstream;
- Implement full legal separation of gas infrastructure ownership and operations from gas trading;
- Realise more of the LNG international downstream value;
- Pursue a project-based, rather than a centrally-planned domestic gas development approach;



- Make a strong maintenance and safety culture a priority;
- Implement international best practice for environmental protection;
- Establish strong linkages with electric power, agriculture, transport and industrial sectors;
- Establish payment discipline throughout the energy chain;
- Honour stability of contract terms;
- Ensure security of assets;
- Ensure compliance with the Nigerian Content Act.

**The Main Aspects of the Gas Policy Now Covered in the Recent Document:**

***Governance (Legislation and Regulation):***

- a. Single independent petroleum regulatory authority;
- b. Emphasis on petroleum safety compliance;
- c. Full legal separation of the upstream from the midstream;
- d. Full legal separation of gas infrastructure ownership and operations from gas trading;
- e. Introduction of a relevant gas network code;
- f. Pricing:
  - i. Upstream gas price set by netback from export parity price during transitional period;
  - ii. Market-led wholesale gas pricing after the transitional period;
  - iii. Triggers for announcement of competitive wholesale market;
  - iv. LNG export tolling price;
  - v. Cost benchmarking for infrastructure facilities;
- g. Fiscal framework which recognises gas as a stand-alone commodity and industry separate from oil.

***Industry Structure:***

- a. Mixed public-private participation, with a clear separation of roles between government and the private sector;
- b. Restructuring of NGC into separate transport and gas marketing companies;
- c. Strategic partnerships to support operations, in particular, for NGPTC;
- d. Greater involvement in marketing Government-owned equity gas in international markets;
- e. Move towards wholesale market competition;
- f. Implementation of Domestic Gas Supply Obligations;
- g. A review of gas aggregation policy and the future role of the Gas Aggregation Company of Nigeria.

***Developing Gas Resources:***

- a. Enable an environment that encourages exploration specifically targeting gas;
- b. Encourage exploration and development of new gas supply sources from the inland and offshore basins;
- c. Develop portfolio management methodologies to prioritise low-cost gas development;
- d. Clarify gas terms for PSCs;



- e. Achieve gas flare-out through gas utilisation projects utilising mature flare reduction technologies;
- f. Produce a Gas Resource Management Plan.

**Infrastructure:**

- a) Identify and proceed with the development of key gas infrastructure;
- b) Liberalise access to offshore and onshore gas transmission infrastructure and gas processing.

**Building Gas Markets:**

- a. Continue gas exports consistent with domestic gas market development;
- b. Identify and promote domestic gas market development projects;
- c. Gain more value from international downstream LNG markets;
- d. Pursue a project-based and market-opportunity approach, rather than centrally-planned national model;
- e. Identify and develop clusters for gas resource, infrastructure and gas based industrialisation;
- f. Develop and implement a gas-for-development programme, encouraging gas for smaller-scale projects;
- g. Take steps to ensure rapid growth of the LPG market, including reviewing effectiveness of NPMC as a market leader/maker;
- h. Investigate, develop and gain access to regional African gas markets;
- i. Set a suitable environment for financing of gas projects.

**Developing National Human Resources:**

- a. Develop Nigerian content and implement Nigerian Content Act;
- b. Build institutional capacity;
- c. Introduce a maintenance and safety culture.

**Communications:** Internal and external communications strategy;

**Roadmap and Action Plan:**

- a. Action plan for short term (months);
- b. Implementation Plan for medium term (1-2 years);
- c. Implementation Plan for long term, over two years. (*Extract from National Gas Policy, 2017*)

In recent times, government, in an effort at improving the sector, came up with a *Flare Gas (Prevention of Waste and Pollution) Regulations, 2018*, and designed the *Nigerian Gas Flare Commercialisation Programme, NGFCP, (2019)*, ostensibly on the realisation that flaring and venting activities had continued in spite of several government's efforts to bring it under control, and have constituted major threat to the development of the natural gas sector in the country. Oil and gas have different project dynamics and should always be separately regulated to achieve coherent and sustainable development in gas. Nigeria has always treated gas as an appendage of oil even despite the approval of a separate policy for gas in 2017. This is crucial to the foot-dragging



developmental pace in the gas sector making the emergence of competition illusory. Nevertheless, “correct economic *and regulatory* policy choices alone cannot spur the development of a gas market. Rather, these choices must be supported by a high degree of commitment on the part of government.

## **Literature Review**

### **Sustainable Development**

The most common definition of Sustainable Development is: ‘Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’ This was a commonly accepted definition qualified by three equal aspects of Sustainability, namely: *Social, Bio-physical, Economic*. Today, this framework is challenged as it is held that business and society cannot exist without a sustainable bio-physical basis. Furthermore, *Political power, policy and decisions* are recognised as a fourth critical aspect. This definition is further qualified by a common acceptance of there being ‘*three pillars of Sustainable Development*’. These pillars are identified in the slogan used at the *World Summit for Sustainable Development*, ‘**Care and respect for People; Planet and Prosperity (Commercial activities)**’. It is recognised that these three pillars are of equal importance – if any one aspect is ignored or given a higher priority than others, the effect will be to unbalance and destabilise all three aspects, because they are inter-connected and inter-dependent. It is also recognised that these three aspects need to be addressed simultaneously – we cannot address them on a one at- a-time basis as this would also create an imbalance.

While the above definition and explanation of the three pillars of Sustainable Development is conveniently short and concise, they do not convey or provide an adequate depth of understanding regarding the intellectual, moral and spiritual values that underlie the concept of Sustainable Development. Firstly, it needs to be understood that Sustainable Development is essentially about ‘*a value system*’. It is not a scientific formula that can be intellectually or mechanically applied to a situation. The concept of Sustainable Development is an evolutionary step forward in human consciousness, awareness and behaviour, leading to a more holistic and balanced value system. To illustrate the evolutionary process of human thinking in very simplistic terms, humanity, at its lowest level of consciousness, operates in a purely survivalist mentality. Once having achieved the ability to survive, humanity moves forward in awareness, seeking to satisfy the desire for comforts and pleasure. Once a level of comfort has been achieved, desire for self-expression and individuality motivate the thinking and behaviour of an individual. The concept of Sustainable Development invites us all, as individuals, to evolve beyond pure self-gratification and short-term thinking into an awareness and understanding that harm to one will eventually cause harm to all. It invites the individual to step beyond current norms of thinking and behaviour to become conscious of the absolute interconnectedness and inter-dependence of all things.

- Becoming aware that allowing poverty to exist is harmful to all, including the wealthy, and also impacts on the delicate balance of nature on Earth.
- Becoming aware that allowing wasteful damage and the destruction of biodiversity and the Earth’s natural resources will have a detrimental effect on human wellbeing and our commercial activities.



- Becoming aware that commercial and wealth-generation activities that ignore social and environmental consequences will in the long run be harmful to commerce and industry themselves.

But it is critically important to reiterate that if we give priority to one of the three aspects – be it people (poverty alleviation) or planet (conservation) or prosperity (business development) – we will unbalance the whole, with detrimental effect to all. We need to address all three aspects simultaneously – with equal importance attached to each of the three pillars. In the face of environmental degradation, loss of biodiversity, poverty and ill health, and the increasing cost of doing business as a result of increased social taxes and higher resource costs, the reality of the inter-connectedness and inter-dependence of People, Planet and Prosperity have become abundantly clear. The negative consequences that we see are a direct result of previously imbalanced thinking.

To quote Albert Einstein: ‘The world we have created today has problems which cannot be solved by thinking the way we thought when we created them.’ But with a more evolved understanding of the value system as encapsulated in the simple definition of Sustainable Development, we can indeed improve the way that humanity lives, works and interacts with the diversity of Earth’s human and non-human co-inhabitants. Therefore, a more holistic approach towards the mitigation and eradication of an identified problem is considered a preferred option and a thinking that aligns with sustainable development. When the problem of gas flaring is solved, it will have a multiplier effect in solving a good number of associated socio-economic, cultural and political problems would be addressed simultaneously.

### **Gas Flaring**

A significant aspect of the policies being reviewed, is that which has to, *inter- alia*, do with the reduction or phasing-out of gas flaring and gas operations in the mid and downstream sub-sectors. So much has been written on gas flaring and effects that it has on the gas sector generally. Experts say that it occurs during the generation/production stage in the upstream sub-sector, but its effect extends to the mid and downstream sub-sectors. The US EIA, *Country Analysis Brief: Nigeria of 27<sup>th</sup> February 2015*, reports that natural gas flared in Nigeria accounted for 10% of the total amount flared globally in 2011. Though the document reports that gas flaring in Nigeria had decreased in recent years, from 540bcf in 2010 to 428bcf in 2013 due to a number of recently developed and upcoming natural gas projects that are focused on monetising the natural gas that is currently flared, (E.g: *Nigerian Gas Flare Commercialisation Programme, NGFCP, 2019*) the fact still remains that a significant amount of Nigeria’s gross natural gas production is flared, as some of Nigeria’s oil fields lack the needed infrastructure to capture the natural gas produced with oil (*associated gas*). In 2013, Nigeria was reported to have flared 428bcf of its associated gas production, representing 15% of gas production. According to Shell, a leading gas producer in the country, the impediments to decreasing gas flaring have been the security situation in the Niger Delta and the lack of partner funding that had slowed progress on project to capture associated gas.

**The Necessity for Gas Flaring:** In order to address the problems of gas flaring, it is necessary to understand why the natural gas is being flared. Because oil and natural gas are mixed in every oil



deposit, the natural gas called “associated gas” must be removed from oil before refining (Ashton *et al.* 1999). Gas flaring is simply the burning of this associated gas. Gas flaring is currently illegal in most countries of the world, where gas flaring may only occur in certain circumstances such as emergency shutdowns, non-planned maintenance, or disruption to the processing system (Hyne 1999). Currently 56.6 million m<sup>3</sup> of associated gas is flared every day in Nigeria (Gerth & Labaton 2004). Nigeria has the world’s highest level of gas flaring, and it flares 16 percent of the world’s total associated gas (GGFR 2002). Due to a lack of utilised infrastructure, approximately 76 percent of associated gas is flared in Nigeria, compared to 8 percent in Alberta, Canada (Africa News Service 2003, Watts 2001).

**Gas Flaring Control Measures:** The Nigerian government has been working to end gas flaring for several years. The dead-line to implement the policies and fine oil companies has been repeatedly shifted, with the most recent being December 2012. In 2008, when gas flaring was expected to get to zero level, the government in power then developed the national gas master plan that promoted investment in pipeline infrastructure and new gas-flared power plants to help reduce gas flaring and provide more gas to fuel the power stations in order to achieve the much-needed improvement in electricity generation.

The US EIA (27<sup>th</sup> February, 2015) report stated however, that progress was still limited because security risk in the Niger Delta had made it difficult for MOCs to construct *infrastructure* that will support gas monetisation. Darah, G.G, writing in *The Guardian Newspaper* in November 1998, and cited in Chukwuemeka Okorie’s work, wrote that The Associated Gas Re-injection (Continued Gas Flaring) Regulations severely altered its predecessor – The Associated Gas Re-Injection Act – and exempted 86 out of 155 oil fields from anti-flaring restrictions. Expectedly, this gave an added impetus to the ugly exercise of gas flaring. On the extent of implementation of the Gas Master Plan Policy, it should be appreciated that the focus was to encourage private sector involvement in the communication of the country’s natural gas in order to enhance the development and diversification of the domestic economy.

The GMP aims at creating a fully liberalised market within the first five years of its implementation through its dual focus approach (Ukpebor, 2009:9). Firstly, it prescribes innovative ways by which Nigeria would maximise the benefit from its gas, from both export and domestic markets. The second approach according to Ukpebor, is that it tried to achieve a dynamic balance between satisfying exports’ demands and the domestic needs. Furthermore, the NGMP indicated a design to establish central gathering and processing units in the three locations of the country, integrate the pipeline networks, adopt a uniform pricing mechanism and specify standard gas spec while maintaining reserve growth. Having carefully considered the policy frameworks and some of the programmes of implementation, the sane conclusion is that the extent of implementation is still far from expectation. Of course, the processes and operations are full of activities and programmes, most of which do not get to stages of achievement. The worst of all is the weak-handling of the issues of gas flaring and provision of enough gas to meet domestic and export demands.

Nigeria has had regulations on the books banning gas flaring for more than a quarter of a century; however, they have yet to effectively implement their policies. In 1969, the Nigerian government legislated a requirement that oil companies set up facilities to use the associated gas within five



years of the commencement of oil production (Manby 1999). The government also enacted the *Associated Gas Reinjection Act (1979)*, which charged oil companies to stop the gas flaring within five years (Manby 1999). However, the companies preferred to pay the fine that the government later imposed as a penalty for gas flaring rather than stopping the flaring. Even though the fine for gas flaring has increased from Naira 0, 5 to Naira 10 (U.S. 11¢) for every 1,000 ft of gas in 1998 (Manby 1999, *Project Underground 2003*), this fine is still too low to have an impact on these companies' policy toward gas flaring. Moreover, the approximately \$3 million per month of fines that the government receives is just a fraction of what it could impose. The reason fines are not increased is that the Nigerian government owes a big debt to oil companies. The government cannot actually collect most of the fine for gas flaring since it has failed to redeem its own obligation (*African Business 2001*).

International organisations, governments, and the major international oil companies have now started to pay attention to this routine gas flaring. For example, the Global Gas Flaring Reduction Initiative (GGFR), led by the World Bank Group in collaboration with the Government of Norway, has just started a project to establish common guidelines and standards for gas flaring and venting on a global basis. The GGFR aims to improve the legal and regulatory framework for flaring reductions (GGFR 2002). This is not only because flaring is environmentally unfriendly but also because it is literally destroying valuable natural resources. Since the issue of global warming has become more high profile in the world, there has been more attention paid to gas flaring, which produces enormous amounts of greenhouse gases (GHGs) including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and propane (Kaldany 2001). In fact, the World Bank estimated that about 10 percent of global CO<sub>2</sub> emission comes from flaring. Nigerian gas flaring alone releases 35 million tons of CO<sub>2</sub> and 12 million tons of CH<sub>4</sub>, which has a higher warming potential than CO<sub>2</sub> (Manby 1999, Watts 2001). In addition to the GHGs, the gas flaring also produces hazardous compounds that harm human health and the ecosystem.

Not only is gas flaring damaging the environment and human health, it is also wasting huge amounts of the country's second most valuable natural resource. In the report of "Africa Gas Initiatives," the UNDP and the World Bank said, "If additional gas utilisation projects are not implemented over the next twenty years, over half of Sub Saharan Africa's current known gas reserves could be flared along the Atlantic seaboard" (ESMAP 2001), the Gas Flare Commercialisation Programme notwithstanding. Additionally, gas flaring in Sub Saharan Africa represents \$3 billion of annual economic loss (ESMAP 2001), and the wasted energy resource through flaring in Nigeria equals about 45 percent of the energy requirements of France, the world's fourth largest economy (Ashton *et al.* 1999).

From an economic perspective, the Nigerian government's main interest in the oil industry is to maximise its monetary profits from oil production (ESMAP 2001). Oil companies find it more economically expedient to flare the natural gas and pay the insignificant fine than to re-inject the gas back into the oil wells. Additionally, because there is an insufficient energy market especially in rural areas (GGFR 2002), oil companies do not see an economic incentive to collect the gas.





From a social perspective, the oil-producing communities have experienced severe marginalisation and neglect (Watts 2000). The environment and human health have frequently been a secondary consideration for oil companies and the Nigerian government.

However, although there may be reasons for the continuous gas flaring, there are many strong arguments suggesting that it should be stopped. Corporations' accountability to the people and environment surrounding them imply that oil companies should be required to re-inject the gas, to recover it, or to shut down any extraction facilities in which the gas flaring is occurring. This paper, sees the economic and environmental benefits of recovering the gas, correcting market failures though a simple way to ensure that the natural gas currently flared is used more efficiently, and which is what the NGFCP, 2019 addresses, as mere interim measure which does not consider the on-coming generation as sustainable development imply.

The present study therefore views, the development of the natural gas sector in Nigeria as a function of the policy framework. It observes that the natural gas policy has in it all that is needed for the sector to improve and be the nation's foreign exchange earner and thus take the position of oil which, from all indications, is fast losing relevance in the global market. It therefore reasons, contrary to Okwoche's perception, and blames the sector's un-development on the slow or inadequate implementation of the relevant natural gas policies. This is the thrust of this study, the area of divergence between it and Okwoche's work and thus the gap in literature.

### **Gas Master Plan**

This gas policy is based on a fundamental review of the policy positions of the Government over the last ten years in respect of Nigeria's gas resources. The previous policy positions emanated from the Gas Master Plan (GMP), which was designed to ensure the development of a full-blown domestic market by 2015. However, the Plan has not delivered on all its set targets. For example, Nigeria still lacks critical gas infrastructure and continues to fall short of *Domestic Gas Supply Obligations*. Nigeria is experiencing a full-blown energy crisis in spite of its abundant gas resources. A new gas policy that is more effective and adjusted for the much harsher international business environment for gas is required to drive the reforms necessary to attract investment into the sector.

### **The Nigerian Gas Value-chain**

Tade Oyewumi, in his work, *The Nigerian Gas Industry: Policy, Law and Regulator Developments*, provides detail account of the gas operations and sub-sectors. These are the Upstream, the Midstream and Downstream Sub-sector Operations respectively. This is shown below:



#### **Upstream-Exploration & Production**

- . NNPC/NPDC
- . IOCs



#### **Midstream**

- Refining Transmission & Processing



#### **Downstream-Storage & Distribution**

- Nigerian Gas Company Ltd
- Shell Gas Nigeria



- . E&P Contracts/Joint Venture Operations
- Liquefied Natural Gas  
NLNG, Brass, OKLNG etc.
- Local Gas Distributors  
. LPG & CNG Distributors.
- Central Processing Facilities-  
OANDO, Chevron etc.
- Gas-to-liquid facilities-Escravos  
GTL, Mobil Oso etc.

**Fig 2.4 Gas Operations and Sub-sectors (adopted from Oyewumi's *The Nigerian Gas Industry....*).**

Oyewumi's work identified the operation in the Upstream as: Exploration and Production, and are undertaken by NNPC/NPDC, IOCs and E&P Contract/Joint Venture Operations. The activities in the Midstream are Refining, Transmission and Processing and are undertaken by: Liquefied Natural Gas-NLNG, Brass, OKLNG etc; while Central Processing Facilities here are provided by OANDO, Chevron, etc. Gas-to-liquid facilities-Escravos GTL, Mobil Oso etc. There is also the West African Gas Pipeline, WAGP, and Trans- Sahara Gas Pipeline TSGP. The Downstream is concerned with storage and distribution and those involved here are: Nigerian Gas Company Ltd, (NGCL), Shell Gas Nigeria, Local Gas Distributors and LPG and CNG distributors.

The third plank of the natural gas policy being examined states that the nation shall put in place the necessary infrastructure and incentives to encourage indigenous and foreign companies to invest in the industry, while the fourth plank of the same policy document states, "the nation shall put in place necessary infrastructures and incentives to ensure adequate geographical coverage of the gas transmission and distribution network. These two aspects of the policy address succinctly the issue of gas infrastructure for the gas value chain and gas utilization projects and plans. The ESMAP Strategic Plan for Nigeria (February 2004), submits that the principal barriers for the development of natural gas are: structure of investment – large investments in pipelines and distribution systems are needed, and inappropriate domestic pricing policy – government policy may also heavily influence gas pricing. For example: through social or sector policies. The document went on to itemize the gas utilization options in order of priority to include: power generation, Gas-to-Liquid (GTL) manufacture, LPG Processing, Cement manufacture, Steel (DRI) manufacture, Fertilizer (Ammonia/Urea). Further Liquefied Natural Gas (LNG), Methanol, and aluminum Smelting.

Whereas the study may not go into the details of the processes that are involved at these different operations, the purpose is to show the diverse areas of operation where gas is needed and by extension exposing the enormous demands and expectations on the policy being examined.

### **Methodology**

This study used descriptive survey research design by collecting and analysing data with which it describes and explained the relationships between the implementation of the two government policies on natural gas as they affect flaring. It is an in-depth investigation which involves a systematic collection of data through the use of questionnaire and interview methods, and the data generated presented and analysed in a way that describes the nexus between these government policies on natural gas and implication on the development of the gas sector in Nigeria.



In addition, interviews were conducted. Twelve (12) of such interviewees were purposively selected based on both their experience and positions occupy within the gas sector; and this is done to complement information obtained through questionnaire administration. Interview Guide which comprised questions that are capable of generating qualitative data on the key components of the policies on natural gas, analysis of the positions held by the two policies individually, constraints; challenges to the full realisation of the objectives of natural gas policies and the future of the gas sector in Nigeria.

This study also obtained its data from secondary sources, such as: books, journal articles, official documents. The study visited the regulatory agency, Directorate of Petroleum Resources (DPR) at the regional office in Ado-Ekiti.

### **Discussion on Findings**

The study finding revealed that, the policies have not achieved much at curtailing the excesses of Major Oil Companies (MOCs) on gas flaring mainly due to government's dual status of being both an *operator* and *regulator* within the gas value-chain. 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 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 NGP (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 seriously. Furthermore, government has not been able to compel oil companies to comply with the laws and policies of gas flare reduction or outright cessation.

Rather than be active player in 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. The excesses of the MOCs is expressed in their sluggish response to the policy measures towards flare reduction or outright phasing off of it. For instance, they continued to use their regulatory capture tendency and obstructive power to delay the attainment of the zero-flare objective especially of the NGP (2003). Government also has visible constraints in its attempts to implement flare reduction policies. The Nigerian Gas Master Plan (NGMP,2008) was expected to open up new opportunities for flare reduction. Unfortunately, this hope was dashed as much was not realised from the programme.



Furthermore, the new NGP (2017) reflects government's new priority consideration for the channeling of flared gas into markets for utilisation by different downstream sectors. Hence the *Flare Gas (Prevention of Waste and Pollution) Regulation, 2018* and *Nigerian Gas Flare Commercialisation Programme (January, 2019)* respectively. With this position of the policy, flaring activities may continue as long as government is deriving enormous benefits from the practice.

### **Conclusion**

The paper concluded that only a truly independent and an empowered regulator can compel players in the sector to comply with rules especially on natural gas flaring activities. The Nigerian gas sector has not been developed because is yet to get its bearing on it. At best it has been paying lips service to its development. Government's 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.

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. For avoidance of doubts, natural gas is useful for power generation, cement manufacture, fertilizer manufacture, aluminum smelting, for 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 policies on flare reduction as well as for further research:

- ❖ Government should drop its dual status and hold on to a single one of a regulator
- ❖ There should be a determined effort to fulfill the initial four fundamental promises on the NGP (2003), 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 (NGP,2003).
- ❖ 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 policies on flaring 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 policies on flare reduction.
- ❖ 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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