

Gas to Energy Policies and its Implications to the Growth of Nigeria's Economy

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Abstract

This study seeks to investigate the implications of gas to energy policies on the growth of the economy of Nigeria. It explores the Nigerian natural gas policies, objectives and strategies which are design to address energy issues and its consequences on the economy of Nigeria. The main objective of gas to energy policy is the optimal utilization of all the nation's natural gas resources for economic growth and sustainable development. This is in agreement with the Nigeria gas Master Plan (GMP), which was analyze side by side with the Energy Policies of Nigeria. A descriptive approach was used for this study. The implications of this study are that energy policies have a positive association with the growth of an economy and lead to the growth in energy consumption, which directly causes reduction in unemployment, and a boost of Small and Medium Enterprises (SMEs). Findings from this study revealed that energy contribute immensely to economic growth in terms of Gross Domestic Product (GDP) and revenue earnings and generation. In addition, the energy policies encourages foreign and local investors to invest in the natural gas business in Nigeria, which will lead to job creation and employment. Based on the findings, lack of strict adherence to the Gas Master Plan by oil and gas producers and slow implementation of the Energy Policies has pave way for slow development of the economy. Therefore, stating energy policies is not enough, but implementation and enforcement of the policies will drive the economy positively.

Keywords: Energy, Economy, Nigeria, Gas, Policies

1. Introduction

The quest for economic growth by developing economies (in this case Nigeria) is clearly justified against the backdrop of rapidly rising populations, deteriorating standards of living, inflation, foreign debt, unemployment, environmental degradation and social unrest (Peterside, 2004). Economic recession has drove many Nigeria to the breadline. However, the domination of the Nigeria's economy by oil and its dependence on the oil sector and accruing revenues to spearhead and spur the

economy towards economic buoyancy has clearly failed to yield the expected dividends (Ehanmo, 2005). The dynamic nature of oil price has not favour the Nigeria economy. Economic growth is regarded as a positive goal, since growth generates increase in income and increased in income is required for increased material well-being (Ehanmo, 2005). Economic growth provides more work and generates more income. It can lead to wealth creation at the individual and community level, allowing people to raise their material standard of living and potentially strengthen communities.

Higher incomes are generally associated with better health and housing. Advanced countries tend to attract migrants, and higher wealth is associated with increased geographical mobility and leisure time (Ehanmo, 2005).

World economies are heavily reliant on energy and Nigeria is not an exception. As Alam(2006) puts it, "energy is the indispensable force driving all economic activities". In other words, the greater the energy utilization, the more the economic activity in the nation and as a result a greater economy emerges (Odularu and Okonkwo, 2009)

Today, Nigeria is seen as one of the greatest developing nations in Africa with highly endowed natural resources including potential energy sources. However, increasing access to energy in Nigeria has proved to be not only a continuous challenge but also a pressing issue with the international community. Economic growth is a prerequisite for a nation to move from a third world country to a developed country. The greater the economic growths for a country like Nigeria, the better its chances to become more developed. With adequate utilization of energy potentials to meet demand, the nation would experience high levels of economic growth (Odularu and Okonkwo, 2009).

As Nigeria sets to position herself as one of the world's 20 biggest economies by the year 2020, there is an urgent need to regenerate the nation's oil and gas sector economy. Crucial to the success of the country's long-term economic development and the ultimate realization of our vision 20-2020, must be based on carefully designed road maps of plans and strategies. The successful implementation of these road maps will enable us translate our potential into reality.

Energy is a vital fuel for progress and for a country like Nigeria to develop

its economy, it needs to channel its economic growth policy through its endowed natural resources which includes oil, gas, coal, solar, hydro, biofuels and other renewable energy sources.

The nature and extent of energy demand and utilization in a national economy are, largely, indicative of its level of economic growth. For a productive economy and for rapid and secure economic advancement, the country must pay maximum attention to optimal development and utilization of her energy resources and to the security supply of her energy needs. To do this, the country needs to put in place a co-ordinate and coherent energy policy, which will serve as a blueprint for the sustainable development, supply and utilization of energy resources within the economy (Energy Commission of Nigeria, 2003).

Luckily, the country is endowed with many energy resource types including oil, natural gas, coal, tar sands, solar, hydro, biofuels and other renewable energy resources to have an optimal energy mix (ECN, 2003). The scope of this work, however, will be limited to harnessing natural gas resources to meet energy demands and utilization.

Natural gas is a clean source of energy when burnt and a critical component of a comprehensive domestic energy plan that encourages the development of the entire portfolio of energy sources, including fossil fuels and energy efficiency. Access to vast new supplies of domestic natural gas, associated and non-associated, rich in methane needed for industrial, domestic and commercial production will revitalize the Nigeria's industrial and manufacturing base.

To maximize the economic potential of natural gas in Nigeria, the need for policies and regulations that enable access and utilization of natural gas is inevitable. This will keep the natural gas markets stable, sustain the economy, and minimize environmental damage.

The aim of this work is to analyze the benefit of natural gas as a source of energy in the betterment of the Nigeria economy.

2. Energy Review

Loris (2011) revealed that natural gas account for approximately 25% of the total energy consumed in the United States (US Energy Information Administration, EIA). It is a major source of America's electricity generation, providing 23 percent today. According to the EIA, the United States consumed 24.1 trillion cubic feet of natural gas in 2010. A new study from the Massachusetts institution of technology estimates that, at current consumption rates the U.S has 92 years' worth of natural gas. He also suggested that all energy policies, including those for natural gas, should focus on increasing access, opening markets, and ensuring safe operations-not unreasonably increasing regulations or subsidizing technologies to force them into the market place prematurely.

Considine (2010) reported that America's natural gas supply would provide tremendous relief to an ailing economy. The estimates that the total value added in gross regional production to Pennsylvania from fracking in the Marcellus shale formation was \$4.8 billion and generated more than 57,000 jobs.

Odularu and Okonkwo (2009) reported that energy efficiency does not just connote a reduction in utility cost but it involves increasing revenue through greater productivity. They opined that with vast potentials of natural gas resources, energy can be adequately supplied in the country if well tapped. They further stressed that if consumption is positively related to economic growth, the benefits of increased consumption includes generating more income boosting economic activities which will boost economic growth and increased development especially poverty reduction.

In Nigeria, 75% of the associated gas is flared. This wastage was due to the inadequate infrastructure and the remedy is therefore to build suitable infrastructure to reduce this wastage, which could have been use to boost supply and increase receipt from sellers of this energy product (Odularu et al., 2009).

Liquefied Natural Gas (LNG) Liquefied Petroleum Gas (LPG), Natural Gas Liquid (NGL) are products of processed natural gas. Their market is constantly increasing due to their clean nature. Domestic consumption of LPG and industrial consumption of LNG and NGL are growing in numbers.

Odularu and Okonkwo (2009) reported that the present period petroleum is more highly correlated with economic growth. Deshazo et al. (2007) stated that "the broad trend toward privatization and deregulation provided and impetus for domestic and foreign investment in energy, with natural gas taking the lead role in several countries, most notably Argentina, Bolivia and Peru." They asserted that natural gas during the 1990s held out the potential to be a motor for greater energy and therefore economic integration in Brazil and the southern core region and concluded that LNG will play an increasingly prominent role in the region as key consumers –Brazil and Chile above all- seek greater energy and dependability of supply.

3. Energy Policy in Nigeria

The level and type of energy producing resources in Nigeria is huge, ranging from fossil fuel to renewable energy, but its utilization is sub-optimal. As stated in the National Energy Policy of Nigeria; "In order to ensure optimal, adequate, reliable and secure supply of energy to, and its efficient utilization in the country, it is essential to put in place a co-ordinated, coherent and comprehensive energy policy. The policy will serve as a

blue print for the sustainable development, supply and utilization of energy resources within the economy, and for the use of such resources in international trade and co-operation" (National Energy Policy, 2003).

3.1. Policies of Natural Gas Utilization

- The nation's gas resources shall be harness and optimally integrated into the national economy energy mix and industrial processes.
- The nation shall engage intensively in gas exploration 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.
- The nation shall put in place necessary infrastructure and incentives to ensure adequate geographical coverage of the gas transmission and distribution network.

3.2. Objectives of the Policies

- To eliminate the flaring of associated gas by 2008.
- To expand the utilization of natural gas as industrial and domestic fuel, as well as for power generation.
- To increase the use of natural gas as industrial feedstock for petrochemical, pharmaceutical and fertilizer plants, etc.
- To use gas to diversify the foreign exchange earnings base of the nation.
- To accelerate the process of technology acquisition and diffusion in the gas industry.
- To encourage indigenous entrepreneurial capability in the gas

industry including the development of end-use devices.

- To determine the level of gas reserves available to the nation.

3.3. Strategies of the Policies

- Encouraging the oil-producing companies to gather and utilize associated gas in order to eliminate flaring by 2008.
- Imposing appropriate and effective penalties to discourage gas flaring.
- Encouraging the establishment of the necessary infrastructure for the effective gathering, transmission and distribution of gas nationwide.
- Providing incentives to encourage industrial and domestic consumers to use gas or to convert to gas.
- Providing incentives to encourage the introduction and use of LPG appliances in areas not accessible to natural gas so as to encourage the consumer preference for gas.
- Establishing suitable infrastructure for the export of natural gas.
- Expanding and promoting gas related R & D outfits in the country.
- Formulating suitable urban and regional planning regulations needed for the effective distribution of natural gas to, and its utilization by, domestic and industrial consumers.
- Providing necessary incentives to indigenous and foreign entrepreneurs to facilitate their participation in the gas industry.
- Ensuring that the price of natural gas is cost-effective, while giving due attention to the effect on local consumption.
- Embarking on deliberate exploration for gas deposits in all parts of the country.

4. Gas Master Plan and the Energy Policies of Nigeria

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In order to utilize the enormous gas reserves in Nigeria, the Federal Government set up a Gas Master Plan. The Gas Master Plan of Nigeria paved the way for utilization of natural gas rather than flaring it. The plan is to allow private sectors (both International and local) invests in the gas business to develop the gas resources in the country, which will have direct impact on the growth of the Gross Domestic Profit of the country (Ubani and Ani, 2016).

In February 3, 2008, the Nigeria Gas Master Plan was approved and the major aim of the plan was to grow the Nigerian economy with gas by pursuing three key strategies:

First Strategy: Stimulate the multiplier effect of gas in the domestic economy.

Second Strategy: Position Nigeria competitively in high value export markets.

Third Strategy: Guarantee the long-term energy security of Nigeria (Ige, 2014).

The Nigeria Gas Master Plan and the National Energy Policies for Natural Gas are geared towards optimal utilization of the country's huge reserves of natural gas, to develop and boost the economy per GDP. Lack of strict adherence to the Gas

4. Conclusions

The continued flaring of natural gas has resulted in a substantial waste of energy resources, in addition to contributing to atmospheric pollution. It is therefore imperative to take effective measures to curtail gas flaring, so that the ending of gas flaring does not exceed the deadline of 2008. The estimated results infer that energy policies have a positive effect on the growth of an economy. Further investigation indicates that economic growth leads to the growth in energy consumption, and energy consumption also directly causes employment.

Master Plan by oil and gas producers and slow implementation of the Energy Policies has slow down the development of the economy via lack of energy sufficiency derived from natural gas utilization.

The impact of gas resources and reserves into the country's energy mix has not reached a point where we can be assured of adequate energy supply and security. The present quota and contribution of gas electricity generation is about 34% (Hutchison, 2009). The national electricity sector is paralyzed and under-functioning because, there is low level of contribution of natural gas into the national energy electricity grid of the nation. Participation of foreign and local investors, can transform the power sector. Its attendant effect is a boost on the economy such that Small and Medium Enterprises (SME) grow rapidly, because it need power to sustain the business, and every sector that depends on power will also improve. Industries that uses heavy machineries in their production will have no problem of power supply, production will increase, unemployment will reduce drastically and company will pay tax comfortably to the Federal Government.

Since a high percentage of Nigeria foreign earnings come from oil, a comprehensive diversion or substitution with gas will lead to positive boost in the foreign earnings and the Gross Domestic Product (GDP), placing Nigeria at the forefront of the international oil business. Therefore, substituting gas for oil wherever possible could be a good policy measure.

The place of energy as a contributor to economic growth cannot be overemphasized. It is therefore paramount that such a sector is not neglected in the country. The government should ensure that energy policies relating to gas resources are implemented to the letter. They should ensure that gas- to-energy

supply is beef up so that more economic activity can thrive. Energy growth in the case of gas should be adopted in such a way that, growth in these sectors stimulates economic growth. Such growth would lead to expansion of employment opportunities in the country.

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