

REFORMING GAS-TO-POWER MARKETS IN SUB-SAHARAN AFRICA: POLICY AND REGULATORY CHALLENGES

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Overview

The aim of this paper is to discuss the emerging legal, contractual and regulatory frameworks for gas-to-power in Sub-Saharan Africa by examining the relevant developments in three key countries, i.e. Nigeria, Ghana and Tanzania. It focuses on the institutional aspects of exploration, production and supply of gas for electricity generation within a sub-region comprising of developing economies. Over the past two decades, there has been growing interest in upstream oil and gas exploration and production in Sub-Saharan Africa. From Nigeria which currently holds the largest gas reserves in Africa and continent's leading producer for several years, to Tanzania which represents an increasing number of new frontiers with significant gas discoveries, and Ghana, a country which typifies several developing economies within the region that depend mostly on importation to meet rising energy and gas-to-power needs, it is becoming more critical to promoting the development of viable, competitive and reliable domestic gas supply chain. In this regard, the role of efficient legal, regulatory and organisational institutions cannot be overemphasised. Globally, there is a growing demand for commercially secure, competitively-priced and yet affordable gas supply to meet energy needs and support economic growth. The trend can be attributed to (i) technological developments in power generation and gas commercialisation such as Liquefied Natural Gas (LNG) and long-distance cross-border pipelines, (ii) the relative environmental benefits of gas compared to other hydrocarbons such as coal, as well as (iii) an increasingly commoditised and international LNG market, led by developments in North America and Australia etc. The shift towards monetising gas reserves and boosting local power generation has also prompted relevant governments to initiate energy industry reforms and economic restructuring to promote efficiency, private-sector investments, liberalisation and security of energy supply.

In Nigeria for instance, while gas and electricity supply faltered, urbanisation and local energy demand surged. Some of the identified challenges include institutional misalignments between the gas and power sectors, coupled with inconclusive reforms leading to legal and regulatory uncertainties and inefficiencies, insecurity in some producing regions etc. The 2017 National Gas Policy lays significant emphasis on domestic gas utilisation for energy and industrialisation, while also seeking to maintain international gas export ventures. In Tanzania, the initial set of gas policy and strategic masterplan suggested the primary intention of private and public stakeholders was to develop gas for exports via LNG while the necessary institutional and infrastructural capacity of the local market develops. However, recent policy and regulatory developments suggest that Tanzania is now pursuing a framework which could enhance investment interests and competitiveness in domestic gas supply for power, especially given the recent market re-organisation and liberalisation policies and regulations. In 2016, the Tanzanian government issued the Petroleum (Natural Gas Pricing) Regulations, Natural Gas Utilisation Master Plan, Electricity Market Re-Organization and Promotion of Competition Regulations and Power Systems Master Plan etc. Ghana exemplifies an import-dependent developing country with growing energy needs. The challenge(s) had been exacerbated by inadequacy of gas supplies via the West African Gas Pipeline Project which was designed to convey gas from Nigeria. As a result, Ghana is actively considering new offshore LNG import and regasification projects primarily to secure needed gas for power generation. The Ghanaian 2016 Gas Master Plan also stipulate a primary objective of developing a medium to long-term strategy for infrastructure development priorities and the country's security of energy supply. By and large, in establishing relevant institutions and regulatory frameworks, it is essential to consider issues such as affordability, transitional pricing arrangements, investments in and adequacy of existing transmission networks along the domestic gas-to-power and energy supply chain.

Methods

An economic analysis of law and comparative approach will be adopted in examining the issues considered in this paper. The paper will also involve a review of existing literature about gas and electricity market reforms, transnational paradigms of economic regulation, competitiveness and security of supply, as well as relevant reports on current trends and outlook.

Results

The results gathered from writing the paper will form part of the policy and regulatory discussions on the challenges and experiences in energy sector reforms in Sub-Saharan Africa in the context of a rapidly evolving international gas supply value chain.

Conclusion

For developing and emerging economies seeking to ensure the reliability and security of energy supply, the evolving international gas supply dynamics appears to be inspiring vital industry institutional and regulatory reforms and restructuring. Accordingly, the quality, effectiveness and efficiency of economic regulation established based on clearly defined policies, laws and regulation in this regard cannot be overemphasized. This is even more crucial in the context of developing countries in the Sub-Saharan Africa context, who have been accustomed to State control and management of public utilities and essential energy supply infrastructure.

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