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An Examination of the Nigerian Gas Law and Policy:  
Facilitating Domestic Gas

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## **An Examination of the Nigerian Gas Law and Policy: Facilitating Domestic Gas**

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### **ABSTRACT**

The Federal Government of Nigeria based on its sizable gas reserves, identified the need for accelerated development of the gas industry as a focal strategy for achieving the national aspiration of aggressive GDP growth. Endowed with energy resources, Nigeria has about 188tcf of proven reserves. Active power plants are mainly gas-fired, but they face feedstock shortages, as a result of a dearth of infrastructure investment. Nigeria's gas industry is still in its infant stage unlike the UK and US. Oil and gas companies have historically flared natural gas into the environment mainly because it was considered an oil by-product and not an economic product. The development of a domestic market today is the top of the government's agenda. The Federal Government recently approved the Nigerian National Gas Policy 2017. The goal as highlighted in the policy is the commercialization of gas to boost the economy, electricity undoubtedly being central to economic growth. This paper discusses, gas pricing, unbundling and open access and the Domestic Gas Obligation. The purpose of this study is to highlight various areas of improvement and provide an analysis of existing laws and policy. Results suggest that market liberalization and increase in private sector involvement are the two strengths agreed upon. In addition, the participants concur on the importance of increasing share of LNG in the total natural gas supply.

**Keywords:** *Gas, Law, Policy, Nigeria*

## INTRODUCTION

Nigeria is a gas province with proven reserves of about 188 Trillion Cubic Feet (Tcf) of gas and an enviable position as the 9th largest reserves holder in the world. Without due process, Nigeria's expectation from the oil industry will be to mainly generate foreign exchange revenues for the coffers of the government, with little concern for the industrial transformation of the country.<sup>1</sup> Nigeria aims to increase electricity generation from 4GW to 120GW similar to that obtained in South Africa. To achieve this the National Gas Policy 2017, have put in place guidance to firstly abort the unnecessary flaring of gas by oil companies and encourage Domestic Gas Supply. This article takes a cue from developed Australia operating a domestic supply scheme. There is the demand for electricity, so the issues are why suppliers don't want to match this demand. This paper aims to address salient issues on; firstly, access to electricity in Nigeria, as discussed in the 2017 Gas Policy. This paper adopts a comparative and analytical methodology. The first part of this paper provides an overview of the Nigerian electricity and gas sector. Part two analyses the principles of National Gas Policy 2017, domestic gas obligations and the flaring regulation.

### Nigeria's energy dilemma

In Niger Delta, there are feedstock issues causing gas shortages to power plants- such as terrorism and vandalism. Secondly places like the north further away from the transmission grids where shortages in all points in the chain mean power is transmitted from far distances. "Electricity generated in the centralized grid is first transmitted to Oshogbo in the heart of the South-West region for onward distribution to the entire country<sup>2</sup>" Vandalism, High losses in transmission and other factors can explain why electricity may not reach the northern and remote areas in Nigeria. It's a horrifying tale to tell, that electricity transmission comes from a single state when there are thirty-six states in Nigeria and the length and breadth of Nigeria is over 910,768 km.

The centralized and closed grid system operating in Nigeria is the prime reason why there is no access to electricity. The countries policy to introduce an in debt mini-grid regulations which provides for generation capacity and feedstock, is a welcomed advantage. The mini-grid can operate in isolation from national electricity transmission networks and supply relatively concentrated settlements with electricity at grid quality level. Discounted cash flow models have been used to explore the impact of electricity pricing and cost-sharing rules on the economics of a small wind-powered mini-grid project in Kenya. The results emphasise the need for policymakers to consider appropriate mini-grid tariffing regulation and how these tariffs interact with any existing national electricity pricing systems. This can be translated also to Nigerian laws on Mini-grids, If all consumers must pay towards gas - infrastructure used according to their consumption, domestic consumers with low energy demands would not join the mini-grid.<sup>3</sup>

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<sup>1</sup> Synge, R., *Energy in Nigeria* (London Middle East Economic Digest, 1986).

<sup>2</sup> Elo Adhekpukol 'The democratization of electricity in Nigeria' [2018] 31(2) *The Electricity Journal*,1-6

<sup>3</sup> Caren Herbert and Euan Phimister, *Private sector-owned mini-grids and rural electrification: A case study of wind-power in Kenya's tea industry* [2019] 132*Energy Policy*, 1287,1297

### Attracting investments

A crucial challenge to DGSO still is the inadequate infrastructure to deliver gas from the upstream suppliers to the market and lack of Third Party access to these infrastructures; also there is a perceived insecurity in GSA contracts, which could hinder investments and the militant attacks in the Niger Delta intensify the perceived danger. Market incentives such as regulations to prevent vertical integration has been put in place, designed to promote new entry in the supply business. Likewise, energy policy should prescribe discretionary regulations capable of correcting any market distortions similar to the power of OFGAS, the UK's gas regulator.<sup>4</sup>

The IOCs have ignored their DGSO obligation. The International Oil and Gas companies have argued that the domestic gas supply obligations include a transfer-pricing arrangement of LNG projects by National Oil and Gas companies, which is not reflective of the actual commercial value of the upstream gas supply on an arms-length basis from the downstream.

The way out for the government had been to impose penalties on the erring companies. The Federal government of Nigeria's threat and refusal to approve further LNG expansions will force IOCs to decide either they put a stop to or suspend all LNG projects or they comply with the DGSO. Nigeria has the power to change its legislation, which works to bind previous contracts. As a matter of constitutional theory, the stabilization clause may not be able to achieve what it sets out to do.<sup>5</sup> These IOCs seem to find every excuse, but Nigerians and the governments expect IOCs to see these obligations as part of their contributions to national development and ease of doing business in Nigeria. Therefore, the issuance and renewal of upstream licenses are being subject to strict compliance by applicants. The Domestic gas reservation policy is obtainable in other parts of the world, like in Australia.

The IOC's have complained that incentives ought to be provided to encourage compliance with the DGSO as against the penalties imposed by the FGN for non-compliance. Ensuring a favorable economic situation is vital to attract investment and to operate reliably. Integrity, a predictable regulatory, commercial and lawful mechanism across the country and the overcoming of security threats, especially in the Niger Delta, which has been exposed to increased staff and property risks and operational disruption.<sup>6</sup> There should be a balance between the imposition of penalties and cooperation in negotiating long-term contracts.

Furthermore, the perceived insecurity in gas supply power agreements between Distribution companies and the IOCs, some of which are not secured by guarantees, has dissuaded domestic investment. These perceived risks led to the financing of gas development projects in Nigeria from gas revenues.<sup>7</sup>

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<sup>4</sup> The national gas policy 2017. <https://www.templars-law.com/wp-content/uploads/2017/07/THE-NATIONAL-GAS-POLICY2c-2017.pdf> [last visited 1st of January 2018]

<sup>5</sup> Sornarajah, M. The International Law on Foreign Investments. University Press Cambridge, London 2 ed. (2004)

<sup>6</sup> Unlocking Nigeria's potential in natural gas <https://www.shell.com.ng/media/nigeria-reports-and-publications-briefing-notes/potential-in-natural-gas.html> [last visited on 1st January 2018]

<sup>7</sup> The national gas policy 2017 <https://www.templars-law.com/wp-content/uploads/2017/07/THE-NATIONAL-GAS-POLICY2c-2017.pdf> [Last visited on 27<sup>th</sup> December 2018]

## Gas Flaring

Large quantities of associated gas as still being flared even with gas flaring penalties in place. This paper considered potential conflicts of interest in the dual role played by the Department of Petroleum Resources DPR as both economic and environmental regulators. Today, not only the British would be held accountable, but even the government of Nigeria will have a case to answer<sup>8</sup>. “The unwillingness of the Nigerian Government and oil companies to accept any divergence from the culture of gas flaring is underpinned by the fact that, even as of today, Nigeria remains a high flaring country.”<sup>9</sup> This is where the question of possible conflicts of interest arises. As stated above, the competent regulator for environmental law and policy in the oil and gas industry, responsible for issuing export licenses, is the Department of Petroleum Resources, which is funded by the NNPC. Unless the DPR is wholly independent of other bodies and institutions it is not best placed to enforce the terms of a judgment against what is essentially its principal.

Economists have argued that the cause of gas flaring is because the operator considers it impossible to use the gas for economic reason, “that the central issue is that the utilization of associated gas presents many complications because of its physical characteristics.”<sup>10</sup> Natural gas can only be transported commercially in its gaseous form via pipelines (or in liquefied form in specially constructed cryogenic tankers). Both these modes of transportation require confirmed buyers. There are domestic power companies, petrochemical companies that can make use of this gas, but we don’t have sufficient pipelines, or regasification plants for LNG devoted for domestic use.

Nigeria has recently issued the Flare Gas (Prevention of Waste & Pollution) Regulations 2018. In light of enabling legislation the new regulation has a permits regime to enable third-party investors’ access to petroleum lease areas to carry out the taking of the flare gas. It argues that public interest is at the heart of the Regulations and considering enabling legislation and previous case law, justifies its provisions given the pollution and economic waste ill-effects of gas flaring<sup>11</sup>.

## The Gas Industry

The privatization and liberalization of power sector assets are laudable, thus it is essential to ensure a simultaneous development of the appropriate regulatory framework for the domestic gas sector. Is privatization and liberalization the way forward for gas? Is UK the best structure to follow?

There is an inextricable link between the persistent gas to power shortages and the existing regulatory framework in the domestic gas supply. If the regulatory framework creates a commercial environment, investment in gas supply infrastructure will flourish. But the laws in place so far are not the best the dearth and opacity prevalent in relevant institutional and regulatory framework mean that the institutions responsible for the security, maintenance, and operation of gas infrastructure are groping in the dark.<sup>12</sup> The NNPC currently holds 49% of shares in NLNG company, this is a controlling interest and unnecessary. It is problematic merging oil and gas operations in one organization, especially when the government and the

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<sup>8</sup> *ibid*

<sup>9</sup> Eddy Wifa and others, “Potential conflicts of interest in the dual functions of the Nigerian Department of Petroleum Resources as both economic and environmental regulator” [2016] *International Energy Law Review*

<sup>10</sup> Paul Tamuno, ‘A sequential analysis of Nigeria’s attempts to end gas flaring’ [2018] 1(1) *International Energy Law Review*, 17-26

<sup>11</sup> Nigeria’s Flare Gas (Prevention of Waste & Pollution) Regulations 2018

<sup>12</sup> *ibid*

NNPC do not exactly have a track record of giving oil and gas operations and development equal emphasis, resources, and attention

Gas and Oil businesses process at different rates and require different levels of sophistication. By virtue of the PIB 2018, The NNPC have overriding powers as both an oil and parent company of NGC and NLNG. This is a deviation from the PIB 2012 and industry trends where the National Gas Company and Nigerian LNG were established for exclusively gas business.<sup>13</sup>

### **The National Gas Policy 2017**

On June 28, 2017, Nigeria's cabinet approved the National Gas Policy, expanding the policy strategies of the 7 Big Wins initiative. The Policy aims to reduce Nigeria's reliance on crude oil by increasing gas exploration, installations and infrastructure investment, Nigeria could potentially improve its creaking power grid. Prioritizing domestic gas demand requirement. Note that the domestic gas obligation hinges on access to infrastructure, a clearly articulated pricing path and institutional capacity strengthening. The system will also unbundle the National Gas Company.

The objective is also to separate title of gas ownership and gas trading. By so doing there would be efficient and transparent point-to-point gas transportation agreements, with flexibility for third-party access meaning that third parties are welcomed, policy must be set up to this effect and completion of the network code shall be the driver of the policy. To introduce market-led wholesale gas policy.

The vertically integrated operation system of natural gas transmission has led to lagging pipeline network construction, low transmission network utilization rates, and high consumer prices in China. Vertical integration is more common in regions with weaker institutions. Politically connected firms are more vertically integrated. Vertical integration by unconnected firms correlates with better economy performance.<sup>14</sup> Finally, vertical integration among politically unconnected firms is associated with elevated per capita GDP level and growth, while vertical integration among politically connected firms is unrelated to local economy performance.

### **Third Party Policy**

Unbundling and open access are perhaps the most fundamental yet unresolved area of the new policy, because the transport network, for example, already being a regulated segment, would have the finances of its investment in a relatively new gas market enhanced by allowing the pipeline company to participate in network operations and supply businesses. Arguments in favour of vertical integration states that State policy should focus on facilitating new entry by a mechanism for the definition of the rules of pipeline access for third parties rather than unbundling and potentially adversely affecting the economics of grid investment<sup>15</sup>. Thus, third party access should not be premised on who owns the infrastructure or transmission line, but the operator. Therefore, a producer can own the infrastructure and vice versa so long as there are no direct interests in operation and ownership; but how feasible is this? Independent economic regulation by itself can deliver little, unless backed by a strong political will<sup>16</sup>.

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<sup>13</sup> Elo Adhekpukoli 'Legislative Comment Strengthening governance in Nigeria's petroleum industry: a review of the Petroleum Industry Governance Bill 2016' [2016] *International Energy Law Review*

<sup>14</sup> Joseph P.H. Fan and others, 'Institutional determinants of vertical integration in China' [2017] 44 *Journal of Corporate Finance*, 524-539

<sup>15</sup> *ibid* at 7

<sup>16</sup> Mahalingam, S and Sharma, D, 'Political economy of independent regulation in India's natural gas industry' [2017] 52 (20) *Economic and Political Weekly*, 44 - 50

There has been restructuring in the implementation of natural gas exploitation through pipelines in Indonesia. The law provides more space for private entities to engage in gas exploitation with the purpose to create healthy competition, transparency, improving national development, efficiency in exploiting natural gas and to develop competitive price so that the end consumer can enjoy the benefits<sup>17</sup>.

A nation needs energy to survive and thrive, which its population can access and afford. Government of India intends to increase energy availability by increasing the share of gas, in the energy mix from 7.1 to 20% by the year 2030. However, this is not possible unless there is a thriving gas market in the country<sup>18</sup>. The current Indian gas market like Nigeria has distortions such as monopoly power, inadequate infrastructure.

Gas market evolution curve helps understand various phases of gas market, starting from government controlling the gas chain, negotiated market, early wholesale long-term contracts and fully developed gas market. The key challenge for India is to ensure that the energy is available and accessible to its 1.3 billion people at affordable price while meeting its obligations on carbon emissions.<sup>19</sup> Successful reforms can have an impact on the market structure, which might lead to increased competition and price reductions. However, our findings suggest that the market reforms were successful in terms of liberalizing the sector, whereas the market structure did not affect the natural gas prices. Thus, we see a “successful failure” of the European natural gas market reforms.

### **The European Natural Gas Market and Its Regulation**

As discussed, it is important to understand the basics of the natural gas market in general (inter alia, its monopolistic market structure, dominance of vertically integrated companies, long-term contracts with take-or-pay clauses, and oil price indexation). The regulatory options policymakers have at their disposal in order to liberalize this sector (focusing on third-party access, approaches to unbundling, and regulatory oversight).

Under the Third Energy Package Directives 2009/72/EC and 2009/73/EC, European energy networks are subject to unbundling requirements which oblige Member States to ensure the separation of vertically integrated energy companies, resulting in division of the various stages of energy supply (generation, distribution and supply). The focus is on the application of the rules on the unbundling independent transmission operator (ITO) and the Compliance Officer's as laid down in the Gas Directives. The directive provides for developing an Effective Compliance Monitoring Program and setting out practical rules to be observed by staff in relation to non-discrimination, transparency and the handling of confidential information.

The Nigerian National Domestic Gas Supply and Pricing Regulations 2008 also assigns the Department of Gas with the role of ensuring equitable and transparent access to the downstream gas transportation network. They do not however specify more objective economic and legal

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<sup>17</sup> Parulian Paidi Aritonang 'Analysis on the effectiveness of “unbundling” and “open access” in Indonesian gas business sector' [2019] 49(4) Jurnal Hukum & Pembangunan

<sup>18</sup> Akhil Mehrotra 'Issues and Challenges in Development of Efficient Gas Market' [2017] Natural Gas Markets in India, 197-215

<sup>19</sup> Akhil Mehrotra and Anshuman Gupta 'Indian Gas Market-Roadmap for Creation of an Efficient Gas Market' [2019] *Energy, Environment and Globalization*, 95-115

provisions; such as terms and conditions for a regulated or negotiated Third Party Access framework, competition and qualifications for new entrants' access to existing gas network.”<sup>20</sup> Note that the profitability of gas infrastructure is affected by alternative ways to organize the gas supply chain; and different forms of energy diplomacy.

### **Wholesale Gas supply**

Obstacles to the development of a truly utopian liberalised and competitive gas market, specifically the existence of long-term sales contracts for large sections of the market which is dominated by incumbents, and a lack of transparent and market-related prices which hinders market entry.<sup>21</sup> From a macroeconomic perspective empirical evidence suggests that the liberalization of the gas market will bring positive effects in terms of lower prices and better service for consumers. However, In the EU prices have increased for consumers by as much as double in the past 10 years and public monopolies have been replaced by powerful private cartels.<sup>22</sup>

In 2014 Nigerian Electricity Regulatory Commission (NERC) issued the First 2014 MYTO-2 Minor as a step to regulate Domestic Gas Price an increase from US\$1.80/MMscf in 2013 to US\$2.30/MMscf in June 2014, however this price regulation has been abolished for more competitive processes. Currently, Gazprom maintains the status of the pipeline export monopolist. At the same time, it receives the regulated tariffs in the domestic market, as a measure to restrict the market power in the domestic market<sup>23</sup>. Domestic gas prices in Russia are substantially lower than export netback prices. The Russian government aims to increase the domestic price level in the long term Increasing the domestic gas price will have an adverse impact on the poor.<sup>24</sup> Effects of eliminating the implicit subsidy on natural gas consumption in Russia could lead to windfall profits for non-Gazprom producers. Hence, to increase government revenues, the gas-price reform could be supplemented by an increase in the capital income tax in the gas sector.<sup>25</sup>

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<sup>20</sup> Tade Oyewunmi, ‘Examining the legal and regulatory framework for domestic gas utilization and power generation in Nigeria’ [2014] 7(6) *The Journal of World Energy Law & Business*, 538–557

<sup>21</sup> Gas industry reform and the evolution of a competitive gas market in Malaysia

<sup>22</sup>

Wegmann, Vera (2019) *Going Public: A Decarbonised, Affordable and Democratic Energy System for Europe*. Technical Report. EPSU, Brussels, Belgium.

<sup>23</sup> Russian gas market: Domestic market deregulation impact on electricity prices

<sup>24</sup> Effects of higher domestic gas prices in Russia on the European gas market: A game theoretical Hotelling model

<sup>25</sup> Anthon Orlov ‘Distributional effects of higher natural gas prices in Russia’ [2017] 109, *Energy Policy*, 590-600



## The Domestic Gas Obligation

The reservation policy has been described by critics as a trade-off with the profits made on the export scene, with no existing guarantee of purchase. Australia's export restriction suppresses the domestic gas price below export netback price. "Several studies equate the policy to a simultaneous tax on gas producers and subsidy to domestic gas consumers."<sup>26</sup> While the Export Parity Netback Gas Price (EPP) for domestic supply obligations represents a reasonable pricing methodology than the former DGSO pricing regime applicable to wholesale gas, it remains to be seen whether it provides sufficient motivation. 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.<sup>27</sup> Clearly, revenues from local supplies cannot compensate for this particular loss.

When dealing with gas commercialisation, a holistic approach must be taken into consideration as well as the target market. Gas commercialisation also means monetisation. Infrastructural information should be specific to the target market which largely influence the kind of infrastructure to be put in place. There's need to ensure that the end user market exist before we can talk about gas development. If the end user market is not there, there won't be economic basis to develop assets. Thus, there are various agreements that must be put in place before taking Final investment decisions FID in upstream<sup>28</sup>

Nonetheless, the government considers it reasonable for there to be a domestic gas supply obligation imposed on producers which is sufficient to kick-start local market development but not so high that producers see it as onerous. "The Domestic gas obligation is a welcomed addition to the Gas Master Plan."<sup>29</sup> Domestic gas supply obligations have become a standard regulatory tool amongst producer nations around the world to ensure gas is available for local markets. These brings to fore whether or regulatory approaches which have worked efficiently in jurisdictions like the US and UK where liberalised or deregulated energy markets has been relatively entrenched, can work in Nigeria.

## The Australian Domestic Gas Policy

In Australia Domestic shortage predictions have spiked gas prices for consumers at to between \$10 and \$16 per gigajoule (GJ), further dissuading energy firms from using gas to generate electricity.<sup>30</sup> Renewable energy offering lower operational costs than gas fired machines. Nigeria must adopt a precautionary approach in its proposals for a willing buyer and willing seller model, because it encourages increase in gas prices and is a challenge for energy security.<sup>31</sup> Even in Developed countries like Australia government influence over domestic price is crucial. And secondly, it is argued that a market-based approach will not provide gas security for Australia without regulatory intervention. It is argued that a market-based approach would not solve the domestic gas shortages of the Australian economy, because the economics do not always add up. As such there needs to be an increase in the level of investments in domestic gas utilisation projects by indigenous companies such as Nigerian Liquefied Natural Gas

<sup>26</sup>Kelly Neill, 'Western Australia's Domestic Gas Reservation Policy: Elemental

Economics' [2017] 36(2) Economic Papers: A Journal of Applied Economics and Policy, 121-134

<sup>27</sup> Musiliu O. Oseni, 'Get rid of it: To what extent might improved reliability reduce self-generation in Nigeria?' [2016] 93, Energy Policy, 246-254

<sup>28</sup> Esc report

<sup>29</sup> The national gas policy 2017. <https://www.templars-law.com/wp-content/uploads/2017/07/THE-NATIONAL-GAS-POLICY2c-2017.pdf> {last visited 1st of January 2018)

<sup>30</sup> Madeline Taylor, Tina Hunter; 'A paradox of plenty: the Australian domestic gas supply regulatory dilemma' [2018] 11(1) *The Journal of World Energy Law & Business*, 465-486

<sup>31</sup> *ibid*

Company.<sup>32</sup> Additional regulatory measures and infrastructure investments are therefore required.

In Nigeria, the major challenges now relate to the lack of or the inadequacy or timeliness of infrastructural investments.<sup>33</sup> Whereas in Australia, infrastructure investment in domestic gas is also an export license condition. Also, the Domestic gas policy requires LNG exporters and gas producers to reserve 15% of their exports for use by local gas customers

## **CONCLUSION/RECOMMENDATIONS**

In conclusion, The National Gas Policy 2017 is undoubtedly a move in the right direction. For a successful implementation, IOC, government and regulators alike must ensure that electricity infrastructure is implemented across states. To achieve this there needs to be a robust regulatory agenda of the Nigerian gas sector. If we are to achieve electricity rates by 2020-2030, Nigerian LNG has to play dual role of both exporter and domestic supplier. Shortages really exist in the limited infrastructure, preventing the free flow of gas, across state, therefore limiting the transmission channels to a single route, this needs to be broken up.

As discussed there are lessons to be learned from the Australian Domestic Gas reservation-pricing regime and the UK liberalisation and Privatisation models. The usefulness of the open access and unbundling system under the National Gas Policy 2017 and the policy shift towards ensuring transparent access to gas transportation, is a welcomed initiative.

Clearer terms on third-party access emulating UK model would undoubtedly increase competition. The aim of this paper is to direct the federal government and policy makers one step closer to uninterrupted electricity supply. It is the desire of the people to build a domestic gas market for economic development

The level of access to energy among Nigeria's rural poor is deficient and for the true overhaul of the sector power must be spread across the entire country. In Nigeria, only 2% of total final energy consumption is from electricity, and these figures will remain low if the government does not put rural electrification on the agenda. Rural electrification can mean decentralization of funds for electric infrastructure investment evidenced in budget and policies. Electricity is a social good, and it ensures economic development. The centralized grid system currently in operation currently impedes access to power. This article advocates for a diversity of electricity mix to enhance the ghastly electricity problem in Nigeria.

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<sup>32</sup> Review of Fiscal Incentives on the Development of the Domestic Gas Market in Nigeria  
<https://www.onepetro.org/conference-paper/SPE-193480-MS>

<sup>33</sup> Oyewunmi, Tade and Iwayemi, Akin P., Gas-to-Power Market in Nigeria: A Regulatory and Economic Assessment (April 26, 2016). Available at SSRN: <https://ssrn.com/abstract=2774412> or <http://dx.doi.org/10.2139/ssrn.2774412>

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