

## Tackling Nigeria's Gas and Electricity Challenges: Policy Options for Accelerated Industry and Economic Development in Post-COVID-19 Era

*Obindah Gershon, Queen-Esther Oye, Evans Osabuohien, Adesola Afolabi & Victoria Okafor*

### Executive Summary

Nigeria's persistent electricity challenge is a socio-economic one - that requires a sustainable solution to induce economic welfare gains and accelerate the economy on the path of sustainable development, particularly with shrinking government revenue - occasioned by COVID-19. Thus, this policy brief considers the structural and regulatory impediments confronting the utilisation of gas in electricity generation and suggests policy options for tackling them. These measures include: the full implementation of the Natural Gas Expansion Programme (NGEP); adoption of market-friendly cost-recovery pricing; the abolishment of the Multi-Year Tariff Order (MYTO), eliminate unfavourable oil and gas licencing requirements, restructure the Nigerian National Petroleum Corporation (NNPC) to a full profit-driven organisation; and unbundle government ownership in the remaining sectors of the electricity value chain.

### Background

Adequate, affordable and sustainable supply of electricity to households and businesses is necessary to spur inclusive and sustainable economic growth cum development (Iwayemi, 2008). This is particularly essential as most of the Sustainable Development Goals (SDGs) are linked to affordable and green energy – SDG 7. Nigeria has experienced persistent electricity crises over the past decades, which has undoubtedly hampered the county's global competitiveness and constrained the efforts to become an industrialised economy. The stylised facts on the energy situation in Nigeria show a shortage in the availability of electricity. In this regard, about 4,000 MW is typically generated from the nameplate capacity of 12,500 MW of its gas-dominant power plants (USAID, 2020). There is also insufficient access to electricity as only about 56.5% of Nigerians are connected to the national grid coupled with frequent power outages for those connected - compared to South Africa with 91.9% of the populace having access to electricity (World Bank, 2018). The myriad challenges in Nigeria's electricity market portend binding growth constraints that need to be resolved with a view to accelerating the growth of the economy and enhance the well-being of the populace.

Natural gas is a significant source of electricity generation in Nigeria, making up over 85% compared to other energy sources. Increased gas utilisation in the power sector offers a robust development outlet for Nigeria. It is, therefore, paramount to fix the underlying disruptions in the gas-to-electricity value chain for optimal utilisation. Other issues that need to be tackled are; insufficient gas supply to the electricity generating plants arising from



# CEPDeR POLICY BRIEF 2020/02, July 2020

Tackling Nigeria's Gas and Electricity Challenges: Policy Options for Accelerated Industry and Economic Development in Post-COVID-19 Era

obsolete gas processing and transport infrastructure, pipeline vandalism, as well as, market liquidity constraints. Concerns on debt overhang, uncompetitive pricing that discourage investment in the generating segment of the market and protracted grid system collapse in the transmission segment remain issues calling for attention. The issues have been further encumbered with the COVID-19 pandemic, which necessitated the revision of the 2020 budget (Osabuohien et al., 2020). These issues necessitate the need to explore relevant policy options for improving Nigeria's gas sector towards optimal utilisation in the electricity industry.

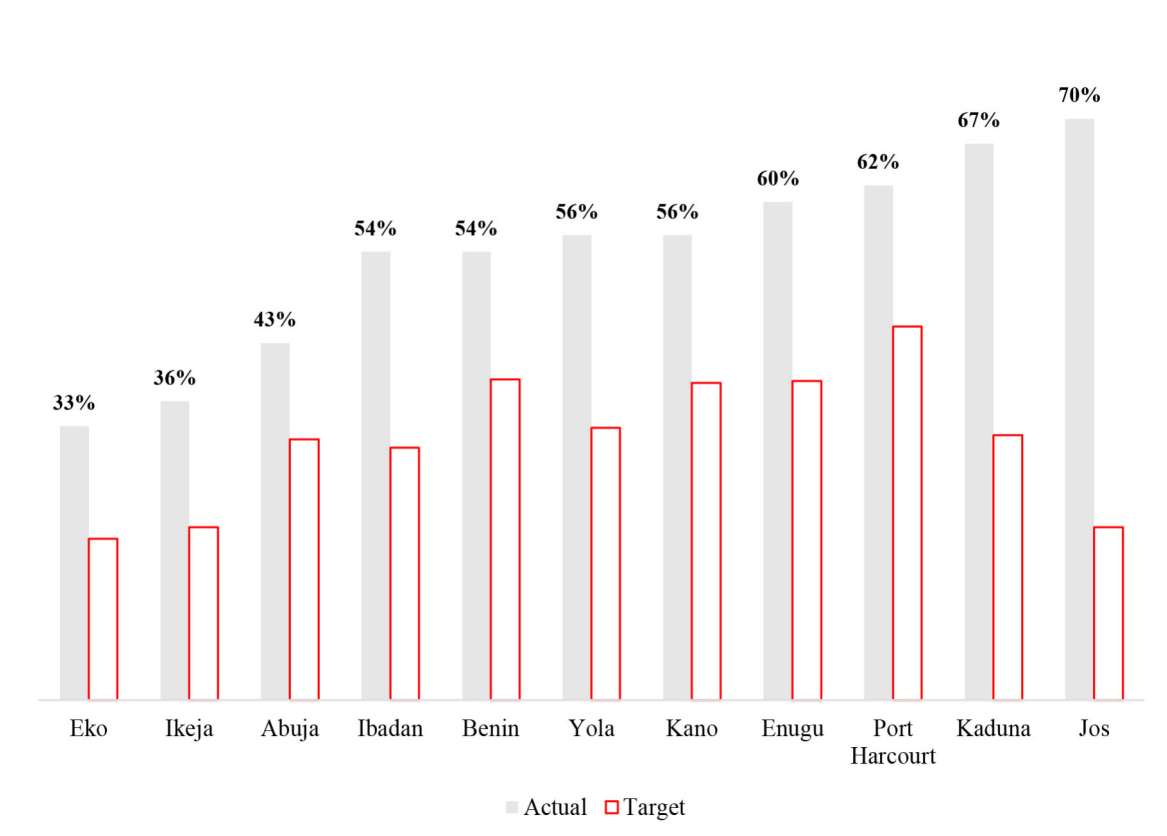


Figure 1: Aggregate Technical, Commercial & Collection (ATC & C) Losses by Distribution Companies (adapted from Nigerian Electricity Regulatory Commission-NERC)

## Policy Issues

The core policy issue that arises from the discourse on the Nigerian gas and power industry focuses on addressing the pricing and structural disequilibrium that has emerged. More so, as electricity demand from a burgeoning population continually exceeds supply, it becomes expedient to ease the sectoral imbalances through removing existing bottlenecks, inefficiencies and constraints in the gas-to-electricity supply chain. Hence, leading to a shift from inefficient regulatory interventions in the gas sector to an efficient framework with



# CEPDeR POLICY BRIEF 2020/02, July 2020

Tackling Nigeria's Gas and Electricity Challenges: Policy Options for Accelerated Industry and Economic Development in Post-COVID-19 Era

increased private sector engagement and cost-reflective pricing is urgently needed. A restructuring could be essential to ensure the gas industry is not hostage to the inefficiencies of the electricity industry as Figure 1 shows.

## What Can Policy Makers Do?

In this section, some measures are proffered that could be adopted to tackle the Nigerian gas-electricity market crises, thereby increasing gas utilisation in electricity generation.

First, there should be a successful implementation of the Natural Gas Expansion Programme (NGEP) – an ongoing initiative by the Nigerian Ministry of Petroleum Resources. The main objective of NGEP is to strengthen domestic gas supply and stimulate demand that will enhance gas utilisation in power (electricity) development. This will entail instituting suitable electricity and gas policy frameworks and incentives for mobilising the requisite assets, resources and infrastructure in the country. Second, the government needs to implement regulations to enable price discovery in gas industries. The funding and contractual structure of the recently commissioned AKK gas pipeline project seems to show that the market could be trusted and supported.

Third, the cost of fuel, cost of purchased power, employee costs, interest charges, basically all costs that necessitate electricity availability must be balanced with the revenue from customers, government subsidies, as well as, supplier credit. Moreover, power tariffs should be reflective of the cost as depicted in Figure 2 to reduce the current market liquidity constraints and the debt overhang, which discourages the supply of gas to power plants by upstream producers. Though rural-dwellers and low-income electricity consumers may not afford higher tariffs, segregation of markets should be enhanced.

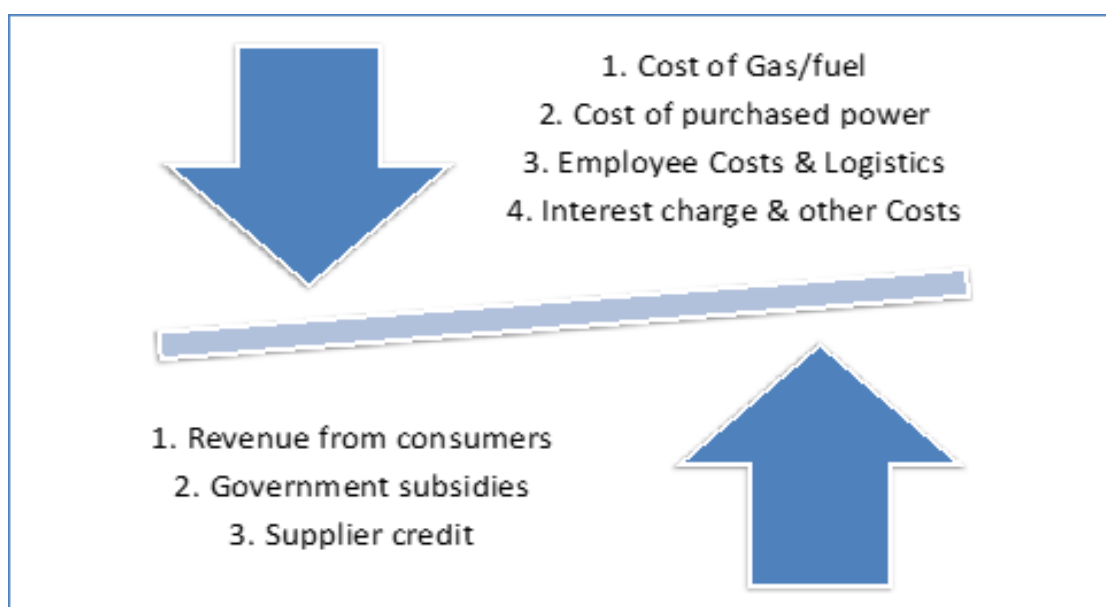


Figure 2: Tariff-setting - Balancing Revenue with Costs

# CEPDeR POLICY BRIEF 2020/02, July 2020

Tackling Nigeria's Gas and Electricity Challenges: Policy Options for Accelerated Industry and Economic Development in Post-COVID-19 Era

Fourth, the Multi-Year Tariff Order (MYTO) should be abolished because it is ineffective and unsustainable, resulting in current operational inefficiencies and unreliable electricity supply. In this regard, perhaps, the guaranteeing role of Nigerian Bulk Electricity Trading (NBET) in a multi-buyer electricity market should be reviewed and redefined for effectiveness.

Fifth, the petroleum industry bill should be passed into law because it will have positive multiplier effects on the natural gas industry. In this regard, some of the oil and gas prospecting and licensing requirements which may stifle investment need to be reviewed. As such, there is the need to further restructure the Nigerian National Petroleum Corporation (NNPC) to a full profit-driven and efficient self-financing organisation capable of funding domestic gas supply investments. Finally, there is the need to consider active and private concessioning of the electricity Transmission System Operator (TSO) as well as ensure that relevant measures (or institutions) to reduce transmission and distribution losses are adopted (set up). Above all, the unbundling government ownership in remaining sectors of the electricity value chain is a sustainable way to go.

## Concluding Remarks

In summary, the challenges of the Nigerian economy regarding access, affordability and availability of electricity can be tackled by simultaneously addressing the structural bottlenecks lingering in each phase of the gas-to-electricity value chain and by the appropriate adoption of market-friendly policies. Finally, critical regulatory linkage and collaboration has to be established between gas and electricity markets towards effective operationality, cost pass-through and competitive pricing. The measure will address the need for consistency in the regulation of both markets. One option is having inter-agency representation on the boards of the Department of Petroleum Resources (DPR) and Nigerian Electricity Regulatory Commission (NERC).

## References

- Bhattacharyya, S. C. (2020). Electricity pricing linkage to natural gas pricing: Workable solutions. CEPDeR Webinar Series 01/06/2020, Covenant University, Ota.
- Iwayemi, A. (2008). Nigeria's Dual Energy Problems: Policy Issues and Challenges. International Association for Energy Economics, 53, 17-21.
- Osabuohien, E., Gershon, O., Oye, Q. & Efobi, U. (2020). Addressing Budget and Debt Vulnerability amidst COVID-19: Policy Pathways for Nigeria. CEPDeR Policy Brief, 2020/01, April. DOI: 10.13140/RG.2.2.18998.04160.
- USAID (2020). Power Africa Sheet: Nigeria. Retrieved from <https://www.usaid.gov/powerafrica/nigeria>

# CEPDeR POLICY BRIEF 2020/02, July 2020

Tackling Nigeria's Gas and Electricity Challenges: Policy Options for Accelerated Industry and Economic Development in Post-COVID-19 Era

World Bank (2018). Sustainable Energy For all. Retrieved from  
<https://datacatalog.worldbank.org/dataset/sustainable-energy-all>

## Acknowledgement

This Policy Brief draws insights from CEPDeR's Webinar titled "Post-COVID: Natural Gas Utilisation and Energy Market Prospects in Nigeria" held 12th June 2020. Hence, the discussion from facilitators and participants as well as CEPDeR Fellows, are acknowledged. The support services provided by Covenant University Management for the event is also appreciated. The design was done by Ebenezer Awodire (Senior Graphic Artist), Media & Corporate Affairs of Covenant University.

## Contact Details

Centre for Economic Policy and Development Research (CEPDeR),  
5th Floor, CUCRID Building, Covenant University, Ota, Ogun State, Nigeria  
Website: <http://cepder.covenantuniversity.edu.ng/>  
Email: [cepder@covenantuniversity.edu.ng](mailto:cepder@covenantuniversity.edu.ng)  
Twitter: @CU\_CEPDeR; Instagram: @cepder\_cu

